

# RETURN

OF THE

## Mortality in 117 Districts of England,

For the Quarter ending March 31st, 1848.

ANNUAL SERIES VII.] PUBLISHED BY AUTHORITY OF THE REGISTRAR GENERAL. [1848.—No. 1.

### STATE OF THE PUBLIC HEALTH IN THE FIRST QUARTER OF THE YEAR 1848.

“The Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6612958 in 1841.

The mortality has been high in the Quarter ending March 31, 1848, but rather lower than in the previous quarter; and, taking the increase of population into account, higher than in the corresponding quarter of the year 1847. The deaths returned were 57710 in the last, and 57925 in the previous quarter. The deaths in the corresponding quarter of 1847 were 56105.

The smallest number of deaths returned in the 10 last winter quarters was 42410 in 1839. The mortality was below the average in the winters of 1839, 1842, 1843, and 1844: in the severe winter of 1845 it was 49996, which is considerably above the average. In the mild winter of 1846 it was much below the average. The rest of the year was unfavourable to health; some of the diseases of hot climates set in; the potato crop failed in England and Ireland, with disastrous effects. In 1847 scurvy, typhus, and other zymotic diseases prevailed; and at the end of the year influenza broke out. Its ravages extended over the country, and continued in some districts through the month of January 1848. The results are shewn below.

	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
Deaths registered in the March Quarters of } 10 years .....	42,410	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
Deaths which would have been registered if the } mortality had been uniform, and the Num- } bers had increased from 1839 at the rate } of 1·75 per cent. annually. ....	43,589	44,352	45,128	45,917	46,721	47,539	48,371	49,217	50,078	50,955
UNHEALTHY SEASONS Difference above the calculated number .....	..	2,024	1,839	..	..	..	1,625	..	6,027	6,755
HEALTHY SEASONS Difference below the calculated number .....	1,179	..	..	1,014	2,973	1,403	..	5,367	..	..

DEATHS REGISTERED in each of the Four Quarters of the Nine Years 1839—1847, and in the March Quarter, 1848, in 117 of the DISTRICTS of ENGLAND and WALES.

Quarters ending	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
March .....	42,410	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
June .....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,734	51,585	....
September .....	37,317	39,498	36,058	39,409	36,953	38,933	36,139	51,427	49,479	....
December .....	41,740	44,186	39,292	39,662	42,608	44,080	39,291	53,093	57,925	....
TOTAL .....	162,711	172,134	161,450	162,543	163,652	168,126	166,273	192,101	215,094	

The Mortality of the District of Lewisham, and of the Sub-district of Hampstead, is included in this Table throughout.

In *London* 16455 deaths were registered in the first 13 weeks of 1848, and 15289 in the first 13 weeks of 1847. The deaths in the winter of 1846 were only 12518; in 1845, however, they had been 14686. The mortality was high during the first 5 weeks of the present year. In the week ending February 5, 1453



were returned exclusive of deaths by violence, and sudden deaths; in the next week the deaths were 1296; the temperature rose; and in the week ending February 19th, the deaths were 1102; in the five following weeks the deaths only varied from 1090 in the first, to 1054 in the last week but one of the quarter ending April 1. Typhus is still epidemic in London, and destroys the lives of from 60 to 80 persons weekly. Small pox, measles, scarlatina, and hooping cough were fatal to many. The deaths ascribed to influenza in the 13 weeks were 102, 102, 89, 56, 59, 47, 27, 33, 18, 11, 10, 16, 8. Pulmonary diseases (exclusive of consumption) were little more than half as fatal at the end as they were at the beginning of the quarter. A great difference will be observed in the causes of death in 1847 and 1848, although the mortality was high in both winters. In the winter of 1847 the deaths from diseases of the lungs were 4056; in 1848 they were 3357; on the other hand, zymotic diseases were more than twice as fatal in 1848 as they were in 1847.

In the districts of the kingdom generally, exclusive of London, the deaths in the winters of the five years 1844—8, were 32494, 35310, 31332, 40816, and 41255. The deaths in the districts of Lancashire and Cheshire in the five winters were 11368, 12896, 11928, 15557, and 15444, and nearly equal in the last two years to the deaths in London, although the population was only 1530460 in 1841, when the population of London was 1948369.

It will be seen from the Registrar's remarks, that typhus, scarlatina, hooping cough, and small pox, were epidemic in many parts of the country. The mortality of Birmingham, Manchester, and Liverpool, still remains excessively high. The deaths in Birmingham were 1660; the population was 138187 in 1841. Birmingham has, in its site, many advantages in a sanatory point of view; and the occupations of the people are not insalubrious; but the beneficence of nature appears to be defeated by the negligence of the authorities. Water, pure air, and a perfect system of drainage are not provided, as they might be, for the whole town; and the consequence is, that want, and the epidemics abroad, have destroyed thousands of the lives of the inhabitants within the last two years.

The fatal effects of collecting large bodies of labourers without adequate house accommodation have been illustrated in Lincoln. The Registrar of the *Home* Sub-district after remarking that the deaths in the quarter were 161 adds:—

"This return shows, that within a period of 2½ years, the mortality has been doubled. The fact is accounted for by the increase of a temporary population connected with the formation of railways, without a sufficient increase of accommodation; which has induced typhus and measles. There have been 19 deaths from fever, 14 from influenza, and 27 from consumption."

But Lincoln itself appears less salubrious than it might be made.

In Nottingham the mortality was high; but not so high as in the winter of 1840.

The mortality in Liverpool and Manchester is still excessively high, but not so high as in the winter of 1847. There is a manifest improvement in Huddersfield, Halifax, Bradford, and Leeds. In Sheffield and York the mortality was higher in 1848 than in 1847.

The extent to which vaccination is neglected in some parts of the country is deplorable, and inconceivable. Such facts as the following are, it is to be feared, not uncommon in other districts besides East Sunderland.

"Deaths 140: considerably above the average; 69 more than in the corresponding quarter of last year. The increase is principally to be attributed to the prevalence of small pox in the district. 47 persons have died of small pox, (only 1 after vaccination). Out of the 140 deaths 84 are under 5 years."

Here 47 persons, chiefly children, died; and this implies that some hundreds besides were injured and disfigured, by a disease that may be almost altogether prevented by vaccination; which the legislature, under the administration of the Poor Law, has placed within the reach of every poor child in the kingdom.‡

‡ An important circular has recently been issued on the subject of vaccination, by the Poor Law Board; at whose request I have instructed the Registrars to present a "notice," to all who register births, reminding them of the provisions of the Vaccination Act,



# TABLE OF THE DEATHS

In 117 of the Districts of England (including the principal Towns): shewing the Number of Deaths Registered in the Quarters ending March 31st.

Deaths Registered in the Quarters ending March 31st											Deaths Registered in the Quarters ending March 31st										
Parts of Divisions and Districts	Population 1841	Years									Parts of Divisions and Districts	Population 1841	Years								
		1840	1841	1842	1843	1844	1845	1846	1847	1848			1840	1841	1842	1843	1844	1845	1846	1847	1848
London exclusive of London	6612958	46376	46967	44903	43748	46136	49996	43850	56105	57710	Shrewsbury	21529	155	146	189	148	163	164	112	165	203
	4664589	34217	32879	32120	31116	32494	35310	31332	40816	41255	Worcester	27130	177	173	133	155	214	173	153	226	237
Aggregate Deaths in the 11 Divisions of England.											Kidderminster	29408	191	225	175	150	242	233	150	218	215
											Dudley	86028	519	603	741	474	547	776	588	931	831
											Walsall	34274	213	290	267	215	197	260	259	292	332
											Wolverhampton	80722	539	653	756	467	540	649	574	769	831
											Wolstanton	32669	244	195	260	271	247	271	239	326	222
											Birmingham	138187	941	1052	1027	895	1118	1275	876	1187	1660
											Aston	50928	303	301	395	263	349	353	265	354	485
											Coventry	31028	192	174	184	265	234	272	213	216	250
											N. Midland Division										
											Leicester	50932	548	431	392	367	415	445	342	442	353
											Lincoln	36110	195	222	209	202	242	196	209	252	281
											Nottingham	53080	525	340	339	376	385	480	293	370	521
											Basford	59634	481	339	309	377	328	349	344	514	408
											Derby	35015	263	275	284	223	266	250	282	278	353
											N. Western Division										
											Stockport	85672	697	646	589	700	477	721	562	642	712
											Macclesfield	50018	621	414	361	537	393	482	387	541	550
											Gt. Boughton, inc. Chester	49085	333	384	388	309	345	365	279	394	411
											Liverpool	223054	2133	2053	2032	1863	1996	1815	1934	3068	2934
											West Derby, (adj. Liverpool)	88652	539	601	576	567	575	668	746	891	1074
											Blackburn	75091	697	503	539	626	514	642	546	786	582
											Preston	77189	632	708	614	509	506	643	566	813	716
											Rochdale	60577	551	419	454	413	479	502	560	482	513
											Bury	77496	678	628	699	530	613	558	605	796	687
											Bolton	97519	757	841	774	754	678	813	817	955	944
											Wigan	66032	668	472	549	415	641	453	538	656	591
											Prescot	43739	400	273	327	278	241	262	237	481	358
											Chorlton	93736	684	644	604	551	622	868	699	832	1029
											Manchester	192408	1852	1608	1592	1649	1541	1922	1527	2185	2079
											Salford	70228	547	543	487	588	502	497	512	575	650
											Ashton	173964	1464	1301	1292	1314	1245	1685	1413	1460	1642
											York Division										
											Sheffield	85076	638	646	740	582	579	650	611	693	880
											Huddersfield	107140	638	638	561	662	607	699	629	1006	780
											Halifax	109175	708	674	614	685	670	736	794	839	662
											Bradford	132164	969	888	884	795	949	1120	1003	1274	891
											Leeds & Hunslet	168667	1073	1173	1333	1135	1088	1228	996	1557	1399
											Hull	41130	336	362	244	254	327	262	309	350	366
											York	47779	351	285	313	266	272	320	336	372	437
											Northern Division										
											Sunderland	56226	358	427	367	315	306	335	490	404	543
											Gateshead	38747	244	254	245	246	216	252	255	330	314
											Tynemouth	55625	310	374	320	337	334	303	318	434	406
											Newcastle-on-Tyne	71850	532	488	474	565	435	466	567	655	820
											Carlisle	36084	210	330	255	193	271	214	248	340	294
											Cockermouth	35676	194	210	186	191	184	220	213	284	258
											Kendal	34694	241	168	179	173	223	219	223	277	213
											Welsh Division										
											Abergavenny	50834	442	364	339	319	472	404	327	450	471
											Pontypool	25037	179	178	123	175	142	139	210	236	245
											Merthyr Tydfil	52864	536	388	284	318	567	508	465	508	559
											Newtown	25958	193	147	119	130	145	151	120	153	180
											Wrexham	39542	260	291	238	278	266	238	207	336	326
											Holywell	40787	280	264	215	259	253	311	203	286	281
											Anglesey	38105	150	177	154	174	202	229	207	244	283

\* The last Quarter in London ended April 1st, 1848.

† The Mortality of the Districts of Wandsworth, and Lewisham, and Sub-District of Hampstead, is included in the above Table, in each of the nine Years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

‡ The former District of Leeds is now divided into the Districts of Leeds and Hunslet, which are both included in the present Return.



# A TABLE OF THE DEATHS IN LONDON FROM ALL CAUSES,

Registered in the Eight first Quarters of the 8 Years, 1841-42-43-44-45-46-47-48.

CAUSES OF DEATH	Quarters ending March*								CAUSES OF DEATH	Quarters ending March*							
	YEARS									YEARS							
	1841	1842	1843	1844	1845	1846	1847	1848		1841	1842	1843	1844	1845	1846	1847	1848
ALL CAUSES .....	13930	12626	12504	13471	14528	12376	15289	16455	IV.—Cephalitis .....	165	139	132	160	149	153	156	156
SPECIFIED CAUSES .....	13814	12500	12413	13385	14491	12322	15245	16366	Apoplexy .....	243	255	264	301	343	329	368	368
I.—Zymotic Diseases.....	2408	1887	2104	2465	2519	2310	1964	4203	Paralysis .....	246	230	239	281	298	273	342	342
SPORADIC DISEASES:—									Delirium Tremens .....	15	17	21	19	24	34	47	47
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	932	898	824	792	819	560	642	576	Chorea .....	1	..	..	3	2	..	..	..
III.—Tubercular Diseases ..	2372	2324	2301	2521	2588	2273	2508	2585	Epilepsy .....	56	64	64	57	62	73	113	113
IV.—Diseases of the Brain, Spinal Marrow, Nerves and Senses..	1657	1516	1630	1696	1733	1558	1856	1786	Tetanus .....	8	9	3	8	3	7	2	2
V.—Diseases of the Heart and Blood Vessels..	300	282	323	416	512	455	666	476	Insanity .....	15	12	6	22	15	21	28	28
VI.—Diseases of the Lungs and of the other Organs of Respiration..	2674	2441	2164	2621	2834	2176	4056	3357	Convulsions .....	771	662	742	702	696	511	619	619
VII.—Diseases of the Stomach, Liver, and other Organs of Digestion..	827	751	723	698	868	779	815	856	Disease of Brain, &c..	137	128	159	143	141	157	179	179
VIII.—Diseases of the Kidneys, &c.....	70	86	69	93	115	130	169	181	V.—Pericarditis .....	17	10	9	24	33	17	29	29
IX.—Childbirth, Diseases of the Uterus, &c.....	180	112	158	114	174	150	205	129	Aneurism .....	16	6	10	9	21	18	14	14
X.—Rheumatism, Diseases of the Bones, Joints, &c.....	90	65	79	74	98	121	141	83	Disease of Heart ..	267	266	304	383	458	420	623	623
XI.—Diseases of the Skin, Cellular Tissue, &c.....	3	7	9	6	7	28	26	22	VI.—Laryngitis.....	7	5	9	9	23	35	62	62
XII.—Malformations .....	15	12	15	23	31	51	49	57	Bronchitis.....	308	287	254	444	632	758	1661	1661
XIII.—Premature Birth and Debility .....	325	314	295	214	270	300	337	301	Pleurisy .....	27	24	23	24	28	33	67	67
XIV.—Atrophy .....	89	108	94	150	189	224	239	339	Pneumonia .....	1294	1290	1168	1327	1296	946	1390	1390
XV.—Age .....	1274	1079	1111	1018	1127	612	971	744	Asthma .....	751	588	458	555	606	244	625	625
XVI.—Sudden .....	253	259	222	174	207	137	173	184	Dis. of Lungs, &c..	287	247	252	262	249	160	251	251
XVII.—Violence, Privation, Cold & Intemperance	345	359	292	310	400	458	428	487	VII.—Teething .....	247	227	225	157	227	129	143	143
I.—Small Pox .....	608	74	145	252	481	77	82	388	Quinsey .....	19	14	21	17	25	10	17	17
Measles .....	160	311	272	334	381	401	99	465	Gastritis .....	214	213	173	19	14	24	23	23
Scarlatina .....	170	123	299	536	421	221	196	615	Enteritis .....	17	10	16	30	44	48	61	61
Hoop Cough .....	655	731	509	487	411	767	544	374	Peritonitis.....	5	6	8	21	24	29	26	26
Croup .....	96	133	110	107	112	79	67	90	Ascites .....	23	18	17	21	25	36	34	34
Thrush .....	45	35	41	45	50	35	38	40	Ulceration (of Intestines, &c.)	32	31	27	34	31	35	58	58
Diarrhoea .....	68	81	69	79	109	119	178	244	Intussusception ..	48	25	22	37	38	36	31	31
Dysentery .....	17	21	33	29	14	20	34	44	Stricture (of the Intestinal Canal)	12	6	6	6	6	8	7	7
Cholera .....	1	..	6	4	4	7	3	9	Disease of Stomach, &c.....	54	50	42	66	68	78	79	79
Influenza .....	146	32	28	66	34	22	63	578	Disease of Pancreas ..	..	..	..	..	..	..	..	..
Purpura and Scurvy ..	..	3	2	5	2	5	16	23	Hepatitis .....	20	12	13	16	22	49	44	44
Ague .....	4	7	5	5	5	4	4	7	Jaundice .....	30	22	35	28	32	34	31	31
Remittent Fever ..	8	5	5	6	5	15	26	19	Disease of Liver ..	105	111	117	97	131	131	149	149
Infantile Fever & "Worms" .....	10	4	3	3	8	19	19	18	Disease of Spleen..	..	3	..	2	..	6	1	1
Typhus .....	324	255	508	432	362	410	442	922	VIII.—Nephritis .....	10	9	5	3	6	10	5	5
Metria or Puerperal Fever, see Childbirth .....	..	..	..	..	..	..	..	109	Nephria (or Bright's Dis.)..	..	..	..	..	..	..	..	..
Rheumatic Fever, see Rheumatism ..	..	..	..	..	..	..	..	19	Ischuria.....	2	..	1	1	..	2	3	3
Erysipelas .....	92	60	57	61	95	71	116	196	Diabetes .....	11	5	6	8	12	4	9	9
Syphilis .....	4	11	12	12	21	28	34	34	Stone .....	4	2	4	6	6	7	12	12
Noma or Canker ..	..	..	..	..	3	9	3	8	Cystitis .....	1	8	2	6	3	3	8	8
Hydrophobia.....	..	1	..	2	1	1	..	1	Stricture of the Urethra .....	3	6	11	14	13	13	16	16
II.—Hæmorrhage .....	57	40	36	41	43	37	58	35	Disease of Kidneys, &c.....	39	56	40	55	75	91	116	116
Dropsy .....	595	608	546	494	505	195	289	198	IX.—Paramenia .....	1	3	4	..	5	3	2	2
Abscess .....	51	36	40	23	10	18	18	31	Ovarian Dropsy ..	4	8	10	7	6	16	15	15
Ulcer .....	8	11	7	11	4	16	19	16	Childbirth, see Metria .....	132	80	112	80	133	101	146	146
Fistula .....	6	3	7	6	1	9	1	6	Dis. of Uterus, &c..	43	21	32	27	30	30	42	42
Mortification .....	83	52	55	49	53	44	57	58	X.—Arthritis .....	..	..	..	1	4	3	1	1
Cancer.....	107	124	115	154	199	238	180	222	Rheumatism.....	39	20	38	31	35	62	73	73
Gout .....	25	24	18	14	4	3	20	10	Dis. of Joints, &c..	51	45	41	42	59	56	67	67
III.—Scrofula .....	25	30	23	36	40	75	53	89	XI.—Carbuncle.....	..	2	..	3	..	1	4	4
Tabes Mesenterica ..	64	73	73	100	116	139	192	233	Phlegmon .....	1	1	..	..	2	9	9	9
Phthisis or Consumption .....	1833	1781	1787	1904	1972	1571	1823	1873	Disease of Skin, &c..	2	4	9	3	5	18	13	13
Hydrocephalus ....	450	440	418	481	460	488	440	390	XVII.—Intemperance ..	4	4	10	11	15	17	12	12
									Privation .....	18	11	8	7	8	7	22	22
									Want of Breast Milk, see Privation & Atrophy	..	..	..	..	..	..	..	..
									Neglect .....	..	..	..	..	..	..	..	..
									Cold, see Privation	..	..	..	..	..	..	..	..
									Poison .....	..	..	..	..	..	..	..	..
									Burns & Scalds ..	..	..	..	..	..	..	..	..
									Hanging, &c. ..	..	..	..	..	..	..	..	..
									Drowning .....	323	344	274	292	377	434	394	394
									Fractures and Contusions ..	..	..	..	..	..	..	..	..
									Wounds .....	..	..	..	..	..	..	..	..
									Other Violence ..	..	..	..	..	..	..	..	..
									Causes not specified	116	126	91	86	37	54	44	44

\* The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan Returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the Quarters ending March they were respectively (1840) 170; (1841) 158; (1842) 157; (1843) 128; (1844) 171; (1845) 155; (1846) 142.

† Under the head of sudden deaths are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the coroner in vague terms, such as "found dead," "natural causes," &c. &c.

NOTE.—It will be observed that the classification of the Abstract is now slightly modified in conformity with the second edition of the nosology. The extension of the list is chiefly due to the improvements in the character of the returns, which are now made, in 93 cases out of 100, by the medical attendants of the deceased and by the coroners.



COMPARATIVE METEOROLOGY OF THE MARCH QUARTERS OF THE YEARS 1846, 1847, & 1848.

Quarters  ending	Years	Mean height of the Barometer, corrected and reduced to 32 deg. Fahrenheit	THERMOMETERS												In the Water of the Thames at Greenwich by the Self Registering Thermometer read at 9 o'clock.		Difference be- tween the dew point temperature and air temperature			Difference between the mean tem- perature of the quarter, and the mean temperature of the same quarter on an average of 25 years	WIND			The mean weekly amount of Horizontal movement of the air	Mean amount of Cloud, 0-10	Rain in inches during the quarter
			Highest during the quarter	Lowest during the quarter	Mean		Dew Point	Self-Registering				Pressure in lbs. on the square foot														
					Of the Highest on each day	Of the Lowest on each day		Difference in degrees	Mean of all observations	Mean of all results	Highest in the sun		Lowest on the grass								General direction	Greatest pressure in the quarter	Mean for the quarter			
											During the quarter	Mean of the observations	During the quarter	Mean of the observations												
															MEAN	Mean of the highest on each day from the observations	Of the lowest on each day from the observations	Mean of the dif- ferences	Mean of the greatest on each day							
March.	1846	29.721	59.9	26.7	48.6	39.1	9.5	43.7	39.8	78.5	54.2	15.0	32.4	45.7	43.5	3.9	7.7	1.1	+4.9	..	12.0	0.6	1039	7.6	5.73	
	1847	29.846	61.2	12.0	42.6	31.8	10.8	37.2	32.2	89.0	54.7	9.0	25.3	39.1	37.4	6.0	11.2	2.1	-1.6	..	16.5	0.3	828	7.3	2.82	
	1848	29.615	73.0	16.8	46.8	35.7	11.1	40.9	36.5	89.5	51.8	12.5	29.5	*39.3	*38.1	4.3	8.0	1.9	+1.8	..	13.0	0.6	1147	7.9	6.43	

\* Mean of 9 weeks.

DEATHS in LONDON from all Causes exclusive of Violent and Sudden Deaths

Number of Weeks .....		1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
Winter Quarter .....	1846	1038	942	1003	874	878	888	858	907	894	829	874	832	988	11,805
	1847	1391	1358	1250	1202	1119	1082	1114	1215	1007	961	1000	1074	949	14,722
	1848	1325	1422	1375	1402	1463	1296	1102	1090	1086	1033	1077	1054	1155	15,870
Mean Temperature .....	1846	40.8	40.8	41.6	48.9	47.7	43.7	36.2	44.1	51.7	47.6	44.2	38.2	42.9	43.7
	1847	29.0	37.3	32.2	32.6	41.7	34.8	25.6	45.7	35.8	37.9	35.7	48.8	46.6	37.2
	1848	40.3	36.0	32.5	29.1	40.8	45.4	41.7	45.0	43.1	41.7	40.7	44.7	51.2	40.9



*Compiled from the Weekly Tables furnished to the Registrar General by the Astronomer Royal.*

*Deaths registered in London from Small Pox, Measles, Scarlatina, Hooping Cough, Typhus, Diarrhea, Dysentery and Cholera, Influenza, Consumption, and other diseases of the Lungs; the numbers at each age,\* and the total deaths + (except violent and sudden) in each of the 13 weeks ending April 1st, 1848.*

[illegible]

† Mean of the first nine weeks.

\* The ages of 57 were not specified in the Table. Deaths returned under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, not when they occur, but at uncertain periods; and they are therefore excluded from this comparison of weeks.



COMPARATIVE METEOROLOGY OF THE MARCH QUARTERS OF THE YEARS 1846, 1847, & 1848.

Arch.	Years	Mean height of the Barometer, corrected and reduced to 32 deg. Fahrenheit	THERMOMETERS												In the Water of the Thames at Greenwich by the Self Registering Thermometer read at 9 o'clock.			Difference between the dew point temperature and air temperature			WIND			The mean weekly amount of Horizontal movement of the air	Mean amount of Cloud, 0-10	Rain in inches during the quarter
			Highest during the quarter		Lowest during the quarter		Of the Highest on each day		Of the Lowest on each day		Difference in degrees		Mean of all observations													
															Of the Highest on each day		Of the Lowest on each day		Difference in degrees		Mean of all observations		Mean of all results			
MEAN		Of the highest on each day from the observations		Of the lowest on each day from the observations		Mean of the differences		Mean of the greatest on each day		Mean of the least on each day		Difference between the mean temperature of the quarter, and the mean temperature of the same quarter on an average of 25 years		General direction		Greatest pressure in the quarter		Mean for the quarter								
1846	1847	1848	79.721	59.9	26.7	48.6	39.1	9.5	43.7	39.8	78.5	54.2	15.0	32.4	45.7	43.5	3.9	7.7	1.1	+4.9	..	12.0	0.6	1039	7.6	5.73
			79.846	61.2	12.0	42.6	31.8	10.8	37.2	32.2	89.0	54.7	9.0	25.3	39.1	37.4	6.0	11.2	2.1	-1.6	..	16.5	0.3	828	7.3	3.82
			79.615	73.0	16.8	46.8	35.7	11.1	40.9	36.5	89.5	51.8	12.5	29.5	*39.3	*38.1	4.3	8.0	1.9	+1.8	..	13.0	0.6	1147	7.9	6.43



# QUARTERLY METEOROLOGICAL TABLE,

*Compiled from the Weekly Tables furnished to the Registrar General by the Astronomer Royal.*

[illegible]

\* The ages of 57 were not specified in the Table.

\* The ages of 37 were not specified in the report.

† Mean of the first nine weeks.



## REGISTRARS' NOTES.

The following Instruction was addressed to the 447 Registrars in the Country:—

“If at any time the number of deaths registered during the Quarter has been *above the average*, state, in a note at the foot of the Return, whether any epidemic disease, such as Measles, Typhus, &c., has been prevailing in the District, or if there be any other known circumstance which will account for the increase.”

The Registrars alone must be held responsible for the opinions expressed in any of the subjoined Notes.

SUP. REG. DISTRICT	REG. DISTRICT	
MAIDSTONE .....	West .....	Deaths 77: 23 above the average of the same quarters of the 6 preceding years.
.....	Loose .....	Deaths 31: being rather above the average. Influenza and pneumonia have been prevalent in the districts, though only fatal in few cases.
BRIGHTON .....	The Palace .....	Deaths 89: There has been no increase in the number of deaths during the past quarter. Although influenza has prevailed, it has been of a very mild character.
.....	St. Peter .....	Deaths 205: During the first two months of this quarter influenza has prevailed to a very considerable extent, and in March bronchitis among children.
ISLE OF WIGHT .....	Calbourne .....	Deaths 29: rather above the average; principally owing to influenza.
PORTSEA ISLAND ...	Kingston and Landport ...	Deaths 143: being 19 more than in the corresponding quarter of last year. Bronchitis and other diseases of the respiratory organs have, (in this as in the last quarter), been very prevalent, chiefly among the aged.
.....	Landport and Southsea ...	Deaths 180: being 22 more than in last quarter. Inflammatory diseases of the chest have prevailed lately.
WINCHESTER and HURSLEY .....	} Winchester .....	Deaths 99: bronchitis has lately been very prevalent among children.
WINDSOR .....		Deaths 40: rather above the average. Scarlatina has been prevalent in a part of the district.
NORTHAMPTON .....	All Saints .....	Deaths 86: exceeding the average by 10. There have been many cases of fever and scarlatina.
.....	St. Giles .....	Deaths 115: rather above the average. Measles is very prevalent, and in 10 cases proved fatal.
BEDFORD .....	Bedford and Cardington...	Deaths 114. This number is unusually high, and greater by 23 than in the corresponding quarter of the last year. The mortality among children has been considerable, principally from measles, whooping-cough, influenza, bronchitis, scarlet fever, and croup.
.....	Sharnbrook .....	Deaths 21: considerably above the average. 12 have occurred from scarlatina, which still prevails.
CAMBRIDGE .....	St. Andrew the Less .....	Deaths 82: the increase arises from small-pox, measles, pneumonia, and Bronchitis.
.....	St. Giles .....	Deaths 35: considerably above the average. Pneumonia has been fatally prevalent, particularly among children of tender age.
NORWICH .....	East Wymer .....	Deaths 101: being above the average, owing to the prevalence of bronchitis and pneumonia among children; 18 deaths have arisen from these causes under 4 years of age.
.....	Conisford .....	Deaths 99: being above the average. Diseases of the chest have been prevalent.
.....	Mancroft .....	Deaths 113: considerably above the average. Both old and young have suffered much from influenza and diseases of the chest. 14 cases have been from influenza, and 30 infants have died this quarter from pneumonia and other infantile diseases. The weather has been very mild and moist.
.....	Coslany .....	Deaths 96: being above the average, principally from pulmonary diseases in children.
GREAT YARMOUTH ..	Southern .....	Deaths 79: being above the average. 14 children have died of inflammation of the lungs, and croup; and 10 old persons have died of bronchial affections after influenza.
DEVIZES .....	Bishop's Cannings .....	Deaths 42: This return shows a great increase, being 23 more than in last quarter, and 14 above that of the corresponding quarter of last year. The chief causes of this increase appear to be influenza and whooping-cough, which have been very prevalent. 20 children died under 5 years of age.
.....	Bromham and Potterne ...	Deaths 41: being above the average. Influenza and whooping-cough very prevalent.
.....	Devizes .....	Deaths 69: far above the average, on account of the prevalence of small-pox, fever, whooping-cough, measles, &c.
ST. THOMAS .....	Exmouth .....	Deaths 35: being 8 or 10 above the average; 9 were from influenza, and 12 from other diseases of the lungs.
.....	Kenton .....	Deaths 32: rather above the average. Bronchitis and influenza were very prevalent during the first 2 months, twelve having died from bronchial inflammation, or its sequelæ. It has now nearly subsided since the warm weather has set in. The change has been very rapid in the temperature of the atmosphere, the thermometer having gone up 10 degrees in 48 hours.
.....	Heavitree .....	Deaths 35: The increase over other quarters arises from the number of very old persons and the subjects of severe chronic-disease, attacked by the influenza.
.....	Broadclist .....	Deaths 24: this is above the average. Influenza and whooping-cough have been very prevalent.



SUP. REG. DISTRICT	REG. DISTRICT	
PLYMOUTH.....	St. Andrew .....	Deaths 251: showing an excess of 100, or 66 per cent. above the average of 10 preceding winters, and the largest number ever registered. The principal causes of death have been, measles, 9; hooping-cough, 20; fever, 14; influenza, 16; bronchitis, 49; phthisis, 19; pneumonia, 14; and all other causes, 110.
.....	Charles the Martyr .....	Deaths 109: The mortality shows an excess of 26 over the corresponding quarter of 1847; the proportions having been 83 and 109. Bronchitis prevailed considerably in the early part of the quarter, and the excess arises mainly from that cause, 24 cases having been registered.
REDRUTH .....	Redruth .....	Deaths 53: slightly above the average, which may be attributed to influenza which prevailed for a few weeks.
.....	Illogan .....	Deaths 68: considerably above the average, arising from the prevalence of influenza and phthisis.
PENZANCE .....	St. Just .....	Deaths 85: being considerably above the average; 52 were of children under 5 years of age. Hooping cough and influenza have been fatal in many cases.
BATH .....	Lansdown .....	The number of deaths (117) is 30 per cent. above the average of this quarter of the year. From influenza, 17 in January. There were 6 deaths from typhus, a large number for this district, which is generally free from it.
.....	Walcot .....	Deaths 110. Although there has been a very great increase, the diseases were of an ordinary character; 9 cases of measles, and 2 of typhus.
.....	The Abbey .....	Deaths 117: the mortality very high. The deaths were, in January, 56; February, 31; March, 24. Bronchitis, pneumonia, consumption, or some other affection of the respiratory organs was registered as the cause of death in 60 cases. Influenza has been registered as a cause of death in only 8 instances, but it prevailed very extensively during January. The accompanying affections of the lungs were stated as the causes of death, though for the most part they supervened on influenza, or where, as in cases of consumption, they were the primary disease, their fatality was derived from the depressing influence of influenza. It is also more than probable, that the mortality in other affections resulted from by-gone attacks of influenza.
.....	Lyncombe and Widcombe....	Deaths 115. Epidemic bronchitis has been very prevalent. Measles caused a great proportion of the deaths of children registered during this quarter.
.....	Batheaston .....	Deaths 57. This number is 25 per cent above the average. Influenza was very fatal, and a great many old persons died from this cause.
BRISTOL .....	Castle Precincts .....	Deaths 121: being 8 above the preceding quarter, and above the average. The increase is from the prevalence of pulmonary and bronchial diseases. These diseases are, in some instances, reported to have been in combination with, or consequent on influenza; but only 3 cases of influenza as the cause of death have been recorded. The mortality was greatest in January, being 46; in February, 35; in March, 40.
.....	St. Augustine .....	Deaths 100: January, 41; February, 36; (which are above the average); March, 23 only. Phthisis and bronchitis were the prevalent causes of death.
.....	St. Mary Redcliff .....	Deaths 112: 6 less than in the corresponding quarter of last year, but about the average number. The district is free from any epidemic. I still have to complain of the length of time the dead are kept before burial. In this quarter a body was kept 12 days, two persons sleeping in the same room the whole time.
CLIFTON.....	Clifton .....	Deaths 103: shewing an increase of 12 above the average of the 8 preceding quarters. Amongst the deaths, 11 were from influenza. 13 persons died of phthisis, chiefly strangers brought to Clifton in hope of gaining health, but too late to do them the good expected.
.....	St. Philip and Jacob .....	Deaths 158. Bronchitis and pneumonia very prevalent.
.....	Stapleton .....	Deaths 118. About 60 above the average, in consequence of the removal of the paupers from the Clifton and Pennyvell Road Workhouse into this district.
.....	Saint George .....	Deaths 59: 47 per cent. increase on the quarterly average. Influenza prevailed generally, and has been the secondary cause in several cases of disease terminating fatally, particularly in aged subjects. 10 persons died whose ages averaged 78 years. In January and March, the deaths were 50 per cent. above, while in February the deaths were 7 per cent. below the monthly average.
STROUD .....	Bisley .....	Deaths 32: shewing an increase over the last quarter of 9. Influenza prevailed to a considerable extent during the months of January and February, the deaths from it being 7. The unusual number of 18 deaths occurred above 60 years of age.
HEREFORD & DORE....	City .....	Deaths 106. Influenza and typhus have prevailed this quarter to swell the deaths, (particularly at the Workhouse,) the number being 24; and more than in any previous quarter since the formation of the Union.
SHREWSBURY .....	St. Chad .....	Deaths 83. The increase has been caused by the prevailing epidemic influenza, which produced inflammation of bowels, lungs, &c.
.....	St. Mary .....	Deaths 120. The greatest number registered in this district in any one quarter; 10 above the highest number, and 40 above the average. This increase occurred during January, in which month 52 deaths were registered. During this month there was scarcely a house in Shrewsbury free from influenza: The epidemic however was of a mild form, and but few deaths are attributed to it. But it is most likely that to influenza may be placed many deaths, (especially among the aged and children) ascribed to bronchitis, asthma, and old age. For out of the 52 deaths, 37 occurred under 5 years of age and above 60. The causes were, influenza, bronchitis, inflammation of the lungs, scarlet fever, typhus fever, and old age.
WORCESTER.....	Worcester, North .....	Deaths 114: 54 more than in last quarter, and 17 more than in the corresponding quarter of last year.
KIDDERMINSTER ....	Kidderminster .....	Deaths 133. Influenza which has been prevalent in this district, has increased the mortality.



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SUP. REG. DISTRICT.	REG. DISTRICT	
DUDLEY	Sedgeley	Deaths 255: which is one more than in the corresponding quarter of 1847. The prevailing causes were scarlet fever, 34; typhus, 10; fever, with secondary diseases, 11; phthisis, 16; influenza, 6; asthma, 6; and other diseases of the lungs as pneumonia, &c., 19.
	Dudley	Deaths 318: considerably less than in the preceding quarter and in the corresponding quarter of last year, but still above the average. The diseases most prevalent are as follows:—convulsions, 44; fever, 43; pneumonia, 32; consumption, 21; bronchitis, 17. Out of the total number registered, 225 have been certified by medical men.
WOLVERHAMPTON and SEISDON	Wolverhampton, Eastern	Deaths 308: from fever, 25; scarlatina, 17; pneumonia, 13; bronchitis, 7; measles, 7; influenza, 6; inflammation of the lungs, 19. There is a slight decrease as compared with last quarter, still the number is considerably above the quarterly average. Fever does not now prevail as an epidemic. Diseases of the respiratory organs are apparently the causes of a great proportion of deaths during the quarter. These have increased or decreased according to the atmospheric temperature of the season.
	Bilston	Deaths 206: being above the average, owing to the prevalence of inflammatory diseases of the chest and lungs, chiefly among children.
	Willenhall	Deaths 116: considerably above the average; 16 from typhus, and 16 from scarlatina.
	Kinsale	Deaths 34: considerably above the average, owing to the prevalence of scarlatina in the district.
WOLSTANTON and BURSLEM	Tunstall	Deaths 145: the mortality above the average. Small-pox is prevalent, and the district is in an unhealthy state.
	Burslem	Deaths 143: 24 above the average of the last 5 corresponding quarters. 7 are attributed to fever; 7 to measles; 4 to croup; 4 to diarrhoea; and several others to diseases of the bowels.
BIRMINGHAM	St. George	Deaths 365: being 149 more than in the corresponding quarter of 1847. There were 50 from scarlatina, 31 from bronchitis, 31 from pneumonia, 24 from phthisis, 21 from influenza, and 8 from typhus.
	St. Mary	Deaths 340: showing an increase on the corresponding quarter of last year of 95, and 11 more than have been registered in any quarter since the Act commenced. The chief causes were fever, 52; bronchitis, 42; phthisis, 29; diarrhoea, 26; pneumonia, 22; and influenza, 12.
	St. Paul	Deaths 98: not so many as in the last quarter, but still an excess above the average of about 25. The following diseases were the most fatal:—bronchitis, 9; pneumonia, 9; scarlatina, 5; fever, 7; influenza, 7; and phthisis, 13.
	St. Philip	Deaths 106: are 13 less than in the last quarter. Scarlatina was very prevalent, and caused 15 deaths. The deaths registered, compared with those of corresponding quarters for the last 4 years, exceed the average by 30. The district is in a more healthy state than during the preceding quarter.
	St. Martin	Deaths 157: although 9 less than in the preceding quarter, they are 27 more than in the corresponding quarter of last year. Scarlatina and bronchitis have been prevalent, and in many cases fatal.
	Lady Wood	Deaths 141: being 11 less than in the preceding quarter; yet considerably above the average. The health of the district seems to be gradually improving, as the deaths in January last are nearly equal to those of the two subsequent months together. Influenza was very prevalent in the early part of the quarter, but only fatal in 6 cases; and those mostly of aged persons who had been afflicted with asthmatic or bronchial affections. There are 18 cases of scarlatina and 7 of typhus.
ASTON	Erdington	Deaths 82: exceeding the average by two-thirds. 13 children died of scarlatina.
	Deritend and Boräsley	Deaths 160: being about 40 above the average, caused by the fatality of such diseases as pneumonia, bronchitis, &c., aggravated by influenza which had been very prevalent. There are also registered 30 cases of scarlatina.
LEICESTER	East Leicester	Deaths 210: 15 less than in the preceding quarter, and 79 less than in the corresponding quarter of 1847. The district is very healthy, no epidemic prevailing. Consumption and inflammation of the respiratory organs are the prevailing diseases.
LINCOLN	Home	Deaths 161. This return shows, that within a period of 2½ years, the mortality has been doubled. The fact is accounted for by the increase of a temporary population connected with the formation of railways, without a sufficient increase of accommodation; which has induced typhus and measles. There have been 19 deaths from fever, 14 from influenza, and 27 from consumption.
NOTTINGHAM	St. Ann	Deaths 181: exceeding by 21 the largest quarterly number since the Registration Act commenced. 88 persons died in January, 46 in February, and 47 in March. This great increase is attributable to pneumonia, bronchitis; influenza, and fever. 67 deaths occurred in the Union Workhouse.
	St. Mary	Deaths 61: full 50 per cent. above the corresponding quarter of 1847, principally owing to bronchitis and other inflammations which have been very prevalent.
	Sherwood	Deaths 37: the corresponding quarter of last year showed 23. The increase has arisen from the prevalence (in the early part of the quarter) of influenza and scarlatina in aged persons and children.
BASFORD	Wilford	Deaths 42: being the average, owing to typhus and influenza, the latter proving fatal to many old people.
	Arnold	Death 60: being above the average; the increase is principally among the aged and the young. Influenza has been very prevalent, and caused 7 deaths. Of 13 persons the average age at death was about 81 years.
	Ilkeston	Deaths 75: being above the average. Typhus and small pox have prevailed in one part of the district, and some cases have terminated fatally. Influenza has been general throughout, and though, in but few cases, death is attributed to this cause, yet it is certain that in many instances, the epidemic has accelerated the fatal termination of previously existing diseases, more particularly in old people.



SUP. REG. DISTRICT.	REG. DISTRICT.	
BASFORD.....	Greasley .....	Deaths 67: being below the average. Influenza proved fatal in several cases at the commencement of the quarter. In all instances the individuals were considerably advanced in years.
DERBY.....	St. Peter .....	Deaths 228. This number exceeds that of the corresponding quarter of last year by 55: 19 were from small-pox, 9 from fever, and 9 from influenza.
.....	St. Alkmund.....	Deaths 125. This return is 27 above the average for 10 quarters ending March 31st, which must be attributed to the large increase of population in the district, and also to the prevalence of small pox of which there have been 15 fatal cases.
STOCKPORT .....	Stockport (First).....	Deaths 242: rather above the average. Typhus, influenza, scarlatina, and measles have been the most prevalent and fatal diseases.
.....	Hyde.....	Deaths 128: being above the average. Scarlatina has been prevalent.
.....	Heaton Norris.....	Deaths 164: being 39 per cent. above the March quarter of 1847. The prevalence of fever on Lancashire Hill, is notorious. A sewer runs along the old road, which is so offensive when heated water from an adjacent manufactory flows through it, that the neighbours run out of their dwellings with floor mats, &c., to stop as well as they can the effluvia escaping through the eye-holes of the drain. This drain crosses Hesketh Street, in which there is considerable mortality, and passing under a number of small gardens, is emptied into a pit close to an open foot-path in the field next to this street, far too near a population, that must feel its deadly effects. It is filled with deleterious living matter, and the persons using it for gardening purposes, say that it is the best manure anywhere to be found. It is a pity that such a town as Stockport and its surrounding hamlets should have such defective drainage, by which thousands living and labouring in it, perpetually suffer; for there is not, perhaps, a borough in the kingdom that possesses greater natural advantages of fall, by which every sewer and drain might have its contents easily emptied into the Mersey and Goyt. Fever has consequently been prevalent, the epidemics being principally typhus and scarlatina. Compared with the corresponding quarter of last year, typhus is 89 per cent., and scarlatina 70 per cent. more fatal. Consumption shows an increase of 53 per cent. Considering the state of the poor but patient working classes, and the absence of proper sanitary regulations, it is wonderful that there is not a greater mortality in this, the worst quarter of the year. Influenza is still epidemic.
.....	Cheadle.....	Deaths 23. Influenza and scarlatina have been prevalent during the quarter.
.....	Hazelgrove .....	Deaths 25. Little more than the average, many being deaths of young children from scarlatina. Small pox is still very prevalent in the district. Those who have been previously vaccinated, get through very well; but the others continue poorly for some time longer. District in other respects healthy.
MACCLESFIELD .....	East .....	Deaths 124: exceeding the average, caused by the prevalence of small pox, typhus, scarlatina, and bronchitis.
.....	Sutton .....	Deaths 78: much above the average. Influenza and small pox were very prevalent in the early part of the quarter. This district is now become very healthy.
.....	Bollington.....	Deaths 74: being above the average. Scarlatina has been very prevalent, and fatal in 18 cases. 50 deaths were certified by medical attendant; 13 were not certified, and 9 had no medical attendant.
.....	Prestbury .....	Deaths 37: being above the average; scarlet fever, measles and influenza, having been prevalent; 14 deaths were from scarlet fever.
GREAT BOUGHTON...	The Castle Division .....	Deaths 162. The average of the corresponding quarters for the last 5 years, is 115. There died from influenza 14 persons; from pneumonia, 12; from bronchitis, 14.
LIVERPOOL .....	Saint Martin .....	Deaths 534: showing a great decrease during the last two months. The mortality of the quarter is less than in any since the middle of 1846. In January, 242; in February, 184; in March, 158.
.....	Great Howard Street.....	Deaths 420. This return shows a great decrease in the mortality of this district, which is accounted for by the removal of the fever shed and the dispersion of the poor who resided in cellars. Otherwise there is no improvement in the health, or cleanliness of the inhabitants. Disease and filth abound more in the upper rooms than formerly in cellars.
.....	Dale Street .....	Deaths 323. This district was never more healthy than at present.
.....	Saint Thomas .....	Deaths 362: being 57 less than in the preceding quarter. Phthisis, bronchitis, and fever, have been the most prevalent diseases. The district is at present healthier than it has been for some time.
.....	Mount Pleasant .....	Deaths 704: including 366 at the workhouse, and 40 at the infirmary. The deaths are 173 less than in the last quarter. There were 147 fatal cases of fever, 33 of phthisis, 41 of marasmus, 16 of diarrhoea, and 6 of dysentery, in the workhouse. There have also been 26 fatal cases of fever in this district, independently of the workhouse. Bronchitis has been very prevalent, and was fatal in 26 cases.
.....	Islington .....	Deaths 402. In the corresponding quarter of last year 294. The increase is owing to the great prevalence of pneumonia, bronchitis, typhus, and scarlatina. From pneumonia, 55; bronchitis, 36; typhus, 26; scarlatina, 16.
.....	St. George .....	Deaths 139: This district is in a much healthier state than in last quarter. No epidemic prevails at present.
WEST DERBY .....	West Derby .....	Deaths 236. The mortality continues above the average. Typhus and scarlatina have been prevalent; but the epidemics appear to be gradually subsiding. Typhus was fatal in 50 cases, scarlatina in 9.
.....	Toxteth Park .....	Deaths 466: showing a decrease of 36 compared with December quarter, 1847. It is very desirable that the proper authorities should give directions, that where cellars, which are sanctioned by the Act to be inhabited, become vacant, they be white-washed with hot lime, which would tend much to the prevention of pestilential diseases.
BLACKBURN .....	Blackburn.....	Deaths 345: being above the average; typhus and influenza having been prevalent this quarter.



SUP. REG. DISTRICT	REG. DISTRICT	
PRESTON.....	Broughton.....	Deaths 39: being above the average; only one more than in the corresponding quarter of last year. 14 persons died whose united ages amount to 1138 years, giving an average of rather more than 81 years.
.....	Walton-le-Dale.....	Deaths 64. This number is 9 above the average. Influenza and typhus have prevailed during the quarter, and have proved fatal, the former in 10, and the latter in 3 cases. Of the 64 deaths registered, 37 were certified, 2 not certified, and the remaining 25 had no medical attendant.
ROCHDALE.....	Castleton within the Borough	Deaths 85: being 25 above the average. Scarletina and measles have been prevalent.
.....	Castleton without the Borough	Deaths 58: being above the average. Scarletina was fatal in 10 cases.
BURY.....	North.....	Deaths 122: being above the average from scarlatina.
BOLTON.....	Eastern.....	Deaths 199. Mortality much less, being 46 less than in the corresponding quarter of last year. The number has gradually diminished since the commencement of the year. In the month of January there were 78; in February, 65; and in March, 56. The malignant typhus which of late has been very prevalent, has almost disappeared, and at present there is no other epidemic.
.....	Western.....	Deaths 185: being 10 more than in the corresponding quarter of last year, and above the average of the corresponding quarter of former years. Measles and scarlatina have been epidemic.
.....	Sharples.....	Deaths 34: nearly double the number of the preceding quarter.
.....	Hallivell.....	Deaths 25. Influenza, measles, and scarlet fever have been very prevalent; but the mortality, notwithstanding, has been small. The district is now more healthy.
.....	Westhoughton.....	Deaths 37: being 12 above the average. The causes of increase are influenza and measles.
.....	Farnworth.....	Deaths 87: the largest number registered in one quarter, since the commencement of the registration; 39 more than in the corresponding quarter of 1847. Typhus, influenza, scarlatina, hooping cough, and measles have been prevalent during the quarter. The district was unhealthy during the greatest part of the quarter.
.....	Tonge with Haulgh.....	Deaths 49: 18 above the general average, and 15 below the corresponding quarter of last year. The principal features in this return are the prevalence of small pox, (4 out of 5 fatal cases without previous vaccination) measles, and an unusual number of coal pit and other accidents.
WIGAN.....	Wigan.....	Deaths 312: being an increase of 13 on the corresponding quarter of last year. 52 deaths had no medical attendance. One person died from want of the necessities of life, and one from exposure to cold. Many of the deaths have occurred in the localities of Wigan where there is a great want of drainage and sewerage, also a want of ventilation in cottage property, and particularly of cleanliness on the part of the inhabitants.
.....	Aspull.....	Death 36. No epidemic prevailed. The severity of winter had a tendency to hasten the death of the aged and infirm, bringing on severe colds; and many of them died without medical assistance.
.....	Upholland.....	Deaths 55. Typhus prevailed.
CHORLTON.....	Chorlton upon Medlock.....	Deaths 257. The mortality has been considerably in excess over any corresponding quarter for the last 5 years, and yet heavy though it be, has not resulted from any special complaint, but would appear to have been dependent on an unhealthy state of the atmosphere, which has favoured the production of a variety of diseases, with the exception of typhus, of which there have been but 3 fatal cases. The following have been the most prominent causes of death:—influenza, 9; measles, 17; scarlet fever, 19; and hooping cough 14.
.....	Hulme.....	Deaths 369: again above the average, which may be attributed to the prevalence of scarlet fever and measles, which diseases were very fatal in the months of January and February.
.....	Ardwick.....	Deaths 200: considerably above the average, and 20 more than in the corresponding quarter of last year. Scarletina maligna is very prevalent in a rural part of the district.
.....	Stretford.....	Deaths 55: being above the average, chiefly owing to the prevalence of scarlatina, 11 deaths having occurred from it.
.....	Barton-upon-Irwell.....	Deaths 131: being above the average, in consequence of scarlatina having prevailed very much this quarter.
MANCHESTER.....	Ancoats.....	Deaths 510: being less than in the preceding quarter, yet the number rather exceeds that of the corresponding quarter of last year, and is much greater than the average for the same quarter of previous years. The rate of mortality has been nearly equal in each month. Scarlet fever has been prevalent, and the typhus epidemic has not yet subsided; the diseases of the respiratory organs have been unusually fatal. It may be worth observing, that this great mortality has occurred during a period when the births have been under the usual average. During the last two quarters fewer births have been registered than in any two quarters since 1844.
.....	St. George.....	Deaths 314: considerably below the corresponding quarter of last year.
.....	Market Street.....	Deaths 402: males, 218; females, 184. The deaths in the district exclusive of those that have taken place in the public establishments, amount to 194, or exactly 97 of each sex. In January 73 persons died; in February, 71, and in March, only 50 deaths took place. Of these 92 were under the age of 15 years; 68 at ages varying from 15 to 60; and 34 were aged 60 years or upwards. The deaths in the workhouse, New Bridge Street, number 89, which is somewhat below the average. In the corresponding quarter of 1847, the deaths in the workhouse were unprecedentedly large, being 259, but a very high proportion of that number was among Irish immigrants. From fever, in the hospital, Long Millgate, only 61 deaths have taken place. In the preceding quarter 142 persons died; from which it is inferred that this agent of destruction is fast disappearing.



SUP. REG. DISTRICT

REG. DISTRICT

**MANCHESTER** ..... *London Road* ..... Deaths 355. This number exceeds that of any corresponding quarter of the preceding 5 years. In that of March 1845, when the season was inclement, the deaths were fewer by 31 than in that just closed, when the weather, though more or less wet, was comparatively mild. The present return is above the average of the same quarter for 1843, 1844, 1846, 1847, by 110 deaths. In March 1845, the causes of death were in excess of those of 1848, measles, (15 per cent.), asthma, marasmus, pneumonia, in all nearly 21 per cent. above the same causes. In March 1848, we have typhus in excess, (nearly 11 per cent.), bronchitis and influenza, (10·72), convulsions, and scarlatina, teething, infantile debility, making together above 31 per cent. over the amount of the corresponding diseases of the same quarter in 1845. The annexed tabular conspectus will more clearly exhibit the correspondence and difference in the respective quarters of the two years 1845, 1848.

No. of deaths registered in March quarter.		12 principal causes of causes of death.	Proportion per cent.		Plus per cent.	
1848	1845		1848	1845	1848	1845
46	7	Typhus .....	12·96	2·16	10·80	—
38	—	Bronchitis, influenza ..	10·72	—	10·72	—
35	30	Phthisis .....	9·86	9·26	0·66	—
32	35	Pneumonia .....	9·02	10·80	—	1·78
24	16	Convulsions .....	6·76	4·94	1·82	—
19	10	Scarlatina .....	5·36	3·08	2·28	—
19	8	Teething .....	5·36	2·47	2·89	—
15	10	Old age .....	4·23	3·08	1·15	—
13	9	Infantile debility .....	3·66	2·77	0·89	—
12	21	Asthma .....	3·38	6·48	—	3·10
10	13	Marasmus .....	2·82	4·01	—	1·19
7	53	Measles .....	1·97	16·35	—	14·38
270	212	12 principal causes .....	76·10	65·40	31·21	20·45
85	112	All other causes .....	23·90	34·60	—	—
355	324	Total causes of death ..	100·008	100·00	—	—

..... *Deansgate* ..... Deaths 296: 213 were certified and 83 uncertified. The number of certified cases has for some time steadily increased. An impression is gaining on the minds of the poor that without a medical certificate, some difficulty may attend the interment of a child, and the consequence is that the children are more frequently taken than formerly to the union surgeons or children's dispensaries. Undoubtedly in this district the adoption of the certificate system has tended considerably to diminish quackery. Of the causes of death, no less than 75 are recorded as having been bronchitic or general pneumonic inflammation. Whether these cases have been simply such or the complication of the epidemic influenza which lately prevailed it would be difficult to state. Probably from the statements in the last general quarterly report, there has been more of the latter than medical men have been generally aware of. It is true that a medical man's attention and observation being confined to the district in which he practises, he is apt to form contracted and local views of the nature and character of the diseases springing up around him, and it is only from the collation of his cases by means of such reports as the one referred to, with others occurring at distant places, that he perceives their identity and is led to ascribe them to the operation of a general cause. From typhus there were 25 deaths; scarlet fever, 19; measles, 9; and small pox, none; convulsions, 25; hydrocephalus, 6; hooping cough, 15.

**SALFORD** ..... *Greengate* ..... Deaths in January, 102; February, 115; March, 117; total 334; about 50 above the average of the winter quarters. 28 deaths were caused by typhus, 17 of which occurred in the fever ward. Hooping cough, measles, and scarlatina have been more prevalent than usual.

**ASHTON and OLDHAM** . *Ashton Town* ..... Deaths 286: nearly 20 per cent. above the average of corresponding quarters. There have been 2 deaths from small pox, (1 without previous vaccination) 25 from measles, 31 from scarlatina, 5 from influenza, 18 from typhus, (11 in the fever-hospital, and 7 in the district.)

..... *Knott Lanes* ..... Deaths 59. The greatest number entered in one quarter since I began to register. The principal causes of death seem to have been scarlatina and diseases of the respiratory organs. The majority of deaths are of children under 5 years old. The moist and cold state of the atmosphere during the quarter has been the chief cause of the excess. The average number for the March quarters of 1846 and 1847, is 34, from which it appears there is an excess this quarter over that average of 25

..... *Dukinfield* ..... Deaths 197: 11 less than in the corresponding quarter of 1847. Typhus fever caused 16, pneumonia, 12; scarlatina, 15; small pox, (without previous vaccination), 5; and influenza, 6.

..... *Mottram* ..... Deaths 62: being above the average. Bronchitis, scarlatina and inflammation of the lungs are the predominant causes.

..... *Oldham above Town* ..... Deaths 220: being above the average, in consequence of typhus, of which there were 28 cases, (22 having occurred in March); also 26 cases of scarlatina.

..... *Middleton* ..... Deaths 64: being above the average, though no epidemic prevails at present to which the increase may be attributed.

..... *Royton* ..... Death 113. The average of the first quarters of the last 7 years is 56. The increase is principally owing to scarlatina, of which there are 35 fatal cases. Some of these were of a malignant character. Measles has been prevalent, also affections of the respiratory organs, probably owing to the wet weather. It is likely that these and other disorders have been aggravated by a want of the necessaries of life, arising from a deficiency of employment.

..... *Chadderton* ..... Deaths 88. Cases of scarlatina, croup, &c., have been unusually prevalent during this and the latter part of the preceding quarter.



SUP. REG. DISTRICT	REG. DISTRICT	
ASHTON and OLDHAM	Crompton	Deaths 67: being above the average. Scarletina and measles have been prevalent principally amongst children.
SHEFFIELD	Park	Deaths 140: very considerably above the average, and the largest number in one quarter since the commencement of the Registration Act. Half the entire number were under 5 years old. There have been 25 cases of fever, chiefly typhus, and 8 of small pox (without previous vaccination) 5.
—	South	Deaths 120: very much above the average, and greater than during any quarter since my appointment as Registrar. Fever has been very prevalent and fatal. There were registered 29 cases of typhus and scarlatina, (the latter chiefly of the malignant character.) The loss of life from that English plague "phthisis," is really frightful, one-sixth of the above number of deaths being from this disease.
—	West	Deaths 135: again above the average; typhus and other fevers have been fatal in 16 cases, influenza in 7. 66 of the deaths have been of persons under 5 years of age.
—	Brightside	Deaths 75: being 2 more than in the last quarter. The mortality has principally been among the very young and the aged. 36 deaths occurred under 5 years. 11 persons died of fever, and 6 of small pox.
HUDDERSFIELD	Huddersfield	Deaths 274: 102 above the average of the corresponding quarters from 1842 to 1846, and 18 above the corresponding quarter of 1847, which is owing principally to measles being so very prevalent. 84 persons died of measles and 21 of typhus.
HALIFAX	Elland	Deaths 60. In the corresponding quarter of last year, the number was 115. The mortality at present in this district is about the average, and were it not for the continued prevalence of scarlatina would be considerably below it. 15 deaths occurred from scarlet fever. The medical certificates state that it has assumed in several instances a malignant type. 3 fatal cases occurred in one family.
—	Luddenden	Deaths 27: being below the average, chiefly owing to many people having left the district from want of employment.
BRADFORD	Manningham	Deaths 68. The number is not much above the average, though small pox prevails in part of the district.
—	Calverley	Deaths 33: being above the average, occasioned by the prevalence of scarlatina.
—	Drighlington	Deaths 22: being less than the average. In the month of January only 2 deaths occurred from natural causes. Notwithstanding the scarcity of employment, the district continues to be healthy.
—	Pudsey	Deaths 88: considerably above the average, owing chiefly to the prevalence of scarlatina among young children, to whom it has proved the most fatal. The epidemic disease with an increased mortality arising from it, commenced about the middle of December last, and continued till the beginning of March, but it is now subsiding.
—	Horton	Deaths 117: exactly the same number as in last quarter; no particular disease; indeed the district is healthy considering the season, and provisions of every kind (except flour) being dear and work very scarce. A very great number of cottages are unoccupied, the former occupants having either emigrated or gone back to the rural districts.
LEEDS	North	Deaths 300: nearly one fourth less than in the same quarter of last year; typhus having nearly subsided. The district is not at present in a healthy state, there being much sickness, but not fatal.
—	West	Deaths 275: 35 fewer than in the corresponding quarter of 1847, still considerably above the average; arising principally from numerous cases of bronchitis and pneumonia, and not from any prevailing epidemic disease.
—	South East	Deaths 260: exceeding those of last quarter by 5; and 6 more than the number registered in the corresponding quarter of last year. Small pox has been very prevalent and fatal, 19 deaths having occurred, in 15 of which the deceased had not been vaccinated.
HUNSLET	Kirkstall	Deaths 133: being above the average. Influenza having prevailed in the district during the early part of the quarter, was followed by measles and scarlatina. The increased mortality was principally in Bramley township where there were 80 deaths. The deaths from influenza, 6; measles, 23; scarlatina, 8.
KINGSTON-UPON-HULL	Myton	Deaths 236: 61 less than in last quarter, but exceeding the corresponding quarter of 1847 by 27. There have been 49 cases of fever. 100 children died under 5 years.
YORK	Bootham	Deaths 114: of which 50 occurred during the month of January, principally caused by influenza and fever. Only 26 have been registered during the last month.
—	Walmgate	Deaths 179: again numerous but not so many as in the two previous quarters. The deaths in the Union Fever Hospital have been comparatively few, and only one of them from fever. The following have been the prevailing causes:—consumption, 18; pneumonia and bronchitis, 16; fever, 16; scarlatina, 13; and influenza, 9.
SUNDERLAND	East	Deaths 140: considerably above the average; 69 more than in the corresponding quarter of last year. The increase is principally to be attributed to the prevalence of small pox in the district. 47 persons have died of small pox, (only 1 after vaccination). Out of the 140 deaths 84 are under 5 years. One person died at the age of 103 years.
—	West	Deaths 73: exhibiting an increase owing to the prevalence of small pox, of which 26 cases terminated fatally.
—	Bishopwearmouth, North	Deaths 128: considerably above the average. There were 19 from small pox, nearly all without previous vaccination. From inquiries made, there is reason to believe, that very many children in this district have not been vaccinated, although the union surgeons perform the operation free of cost to the parents.
—	Bishopwearmouth, South	Deaths 88. There were registered 17 cases of small pox, 11 before and 6 after vaccination.



SUP. REG. DISTRICT	REG. DISTRICT	
SUNDERLAND .....	Monkwearmouth .....	Deaths 114: showing an increase, probably owing to the prevalence of small pox in the neighbourhood during the last quarter. About 21 cases have occurred in the district.
GATESHEAD .....	Gateshead .....	Deaths 187: about 50 more than the average, but from no particular epidemic.
.....	Heworth .....	Deaths 46: a little above the average of the last 5 years. 10 deaths were from fever which has been prevalent in the district. The present condition is healthy.
TYNEMOUTH .....	North Shields .....	Deaths 109: being above the average. 11 are from typhus, and 5 from small pox, (each case without previous vaccination.)
.....	Blyth .....	Deaths 68: being 20 more than in the preceding quarter. The increase is owing to the variable state of the weather, producing many fatal cases of bronchitis and pneumonia particularly among children.
.....	Wallsend .....	Deaths 27: showing an increase on the last quarter of 10. Pneumonia and enteritis have prevailed among children, and in many cases have terminated fatally. Many aged people have died this quarter. Influenza prevailed, and one case proved fatal.
NEWCASTLE-UPON-TYNE .....	Saint Nicholas .....	Deaths 190. This is 37 less than in last quarter, but 21 above March quarter, 1847. Fever still prevails; 49 or more than one-fourth of the deaths have been from this disease. Consumption has also cut off not less than 26.
.....	All Saints .....	Deaths 281: of this number 66 were from typhus. Small pox, measles, and hooping cough, are still prevalent, but not fatal to a great extent.
CARLISLE .....	Saint Mary .....	Deaths 119: being above the average. There have been 11 cases of typhus, and 4 of small pox.
COCKERMOUTH .....	Keswick .....	Deaths 39. The present number is considerably above the average, which may chiefly be attributed to the prevalence of influenza amongst aged people, during a very inclement season. A female aged 98 years, and another 103 years, died of influenza.
ABERGAVENNY .....	Aberystwith .....	Deaths 120: small pox prevailed.
PONTYPOOL .....	Pontypool .....	Deaths 193: being above the average. 29 occurred from small pox, which has been very prevalent in this district; also 10 from influenza.
.....	Usk .....	Deaths 29. The great increase has been caused by influenza having prevailed very much, from which many old people died.
MERTHYR TYDFIL ..	Merthyr Tydfil, Upper .....	Deaths 207: 28 from small pox, in two of which only had the deceased been previously vaccinated.
.....	Gellvgare .....	Deaths 94: showing an increase above the average. A great many children died from hooping cough, scarlatina, and bronchitis; but no epidemic prevails in the district at the present time.
.....	Aberdare .....	Deaths 115. This is above the average. 13 occurred from small pox. One person died from the want of the common necessities of life.
WREXHAM .....	Wrexham ..	Deaths 118: which is above the average. 15 are from scarlatina, 14 from bronchitis, 3 from small pox, 10 from fever, and 2 from influenza. Scarlatina still prevails in the district, and also small pox; but no deaths from the latter cause since the above.
HOLYWELL .....	Holywell .....	Deaths 109: being above the average; owing to the fatality of influenza, pneumonia and small pox.
LLANDDAUSAIN'T ...	Llanddau saint .....	Deaths 70: of which 19 were from shipwreck. Measles and scarlatina have been prevailing in the district.
ANGLESEY .....	Amlwch .....	Deaths 49: being above the average, owing to scarlatina. Many aged people have died this quarter.



REMARKS ON THE WEATHER DURING THE QUARTER ENDING MARCH 31st, 1848.  
By James Glaisher, Esq., of the Royal Observatory, Greenwich.

The weather during the past Quarter has been remarkable in many respects. The daily temperature of the Air has for the most part been above the average, yet there was a period of exceedingly cold weather between the 20th and the 28th of January; the departures from the average on the 26th, 27th, and 28th, were  $12^{\circ}8$ ,  $10^{\circ}8$ , and  $16^{\circ}$  respectively. The temperature then suddenly increased to  $6^{\circ}5$  above the average on the 30th; and for the most part the daily values afterwards exceeded those of the average, or differed very little from them.

It may perhaps tend to clearness if I speak of each subject of investigation separately.

*The Mean Temperature of the Air at Greenwich*

For the month of January was  $34^{\circ}6$ , which is  $1^{\circ}7$  above that of 1842;  $4^{\circ}5$ ,  $3^{\circ}7$ ,  $9^{\circ}1$ , and  $0^{\circ}5$  below those in the years 1842 to 1847 respectively, or it is  $3^{\circ}8$  below the average of these six years:

For the month of February was  $43^{\circ}4$ , which is  $2^{\circ}6$ ,  $7^{\circ}4$ ,  $8^{\circ}2$ ,  $10^{\circ}7$ , above those of the years 1842 to 1845 respectively,  $0^{\circ}5$  below that in 1846, and  $8^{\circ}0$  below that of 1847, or it is  $2^{\circ}6$  above the average of these six years:

For the month of March was  $43^{\circ}8$ , which is  $1^{\circ}1$  below that of 1842;  $0^{\circ}9$ ,  $2^{\circ}3$ ,  $8^{\circ}6$ ,  $0^{\circ}5$  and  $2^{\circ}8$  above those of the years 1843 to 1847 respectively; or it is  $2^{\circ}3$  above the average of these six years.

The mean value for the Quarter was  $40^{\circ}6$ ; that for 1841 was  $38^{\circ}4$ ; for 1842 was  $39^{\circ}5$ ; for 1843 was  $39^{\circ}6$ ; for 1844 was  $38^{\circ}5$ ; for 1845 was  $35^{\circ}4$ ; for 1846 was  $43^{\circ}6$ ; and for 1847 was  $37^{\circ}2$ ; so that the excess for this Quarter above the corresponding Quarter in the years 1841, 1842, 1843, 1844, 1845, and 1847, were  $2^{\circ}2$ ,  $1^{\circ}1$ ,  $1^{\circ}0$ ,  $2^{\circ}1$ ,  $5^{\circ}2$ , and  $3^{\circ}4$  respectively; the only year between 1841 and 1847 whose mean temperature for this period exceeded that of the present year was 1846; the excess of the period in this year exceeded that of the corresponding period of 1848 by  $3^{\circ}0$ . The average value for this Quarter from the seven preceding years was  $38^{\circ}9$ , so that the mean temperature of the air for the past Quarter exceeds that of the corresponding Quarter in the seven preceding years by  $1^{\circ}7$ . This excess is remarkable, from the circumstance of the mean temperature of the preceding Quarter being in excess to the large amount of  $3^{\circ}4$ , so that the temperature of the period between 1847, September 30, and 1847, March 31, exceeds the average by  $2^{\circ}55$ .

*The Mean Temperature of the Evaporation at Greenwich*

For the month of January was  $32^{\circ}6$ , which is  $4^{\circ}7$  below that for the preceding six years.

For the month of February was  $41^{\circ}6$ , which is  $5^{\circ}8$  above that for the preceding six years.

For the month of March was  $41^{\circ}6$ , which is  $2^{\circ}2$  above that for the preceding six years.

The mean value for the Quarter was  $38^{\circ}6$ , which is  $1^{\circ}1$  above that for the corresponding period of the preceding six years.

*The Mean Temperature of the Dew Point at Greenwich*

For the month of January was  $31^{\circ}7$ , which is  $1^{\circ}7$  above that for 1842;  $5^{\circ}6$ ,  $4^{\circ}4$ ,  $4^{\circ}2$ ,  $9^{\circ}1$ , and  $1^{\circ}9$  below those of the years 1843 to 1847 respectively, or it is  $3^{\circ}9$  below the average of these six years.

For the month of February was  $38^{\circ}8$ , which is  $0^{\circ}4$ ,  $5^{\circ}4$ ,  $7^{\circ}0$ ,  $10^{\circ}3$  above those of the years 1842 to 1845,  $1^{\circ}1$  below that of 1846, and  $7^{\circ}8$  above that of the year 1847, or it is  $5^{\circ}0$  above the average for these years.

For the month of March was  $38^{\circ}5$ , which is  $2^{\circ}2$  and  $0^{\circ}4$  below those of the years 1842 and 1843,  $1^{\circ}9$ ,  $8^{\circ}5$ ,  $0^{\circ}2$ , and  $5^{\circ}0$  above those of the years 1844 to 1847 respectively, or it is  $2^{\circ}2$  above the average value for these six years.

The mean value for the Quarter was  $36^{\circ}3$ , which is  $1^{\circ}1$  above the average for the six preceding years.

The mean weight of water in a cubic foot of Air for the Quarter was 2.7 grains, which is of the same value as that of the average for the six preceding years.



*The additional weight of water required to saturate a cubic foot of air was 0.47 grain; the average for the six preceding years was 0.36 grain.*

*The mean degree of humidity of the atmosphere for January was 0.837, for February was 0.864, and for March was 0.839; these values being less than the average for the six preceding years by 0.077, 0.029, and 0.002 respectively; the value for the Quarter was 0.846, which is 0.036 less than the average for these years.*

*The mean elastic force of vapour for the Quarter was 0.230 inch, which is 0.006 inch above the average for the six preceding years.*

*The mean reading of the Barometer at Greenwich for January was 29.816 inches, for February was 29.517 inches, and for March was 29.505 inches; these values are 0.057 inch above, 0.199 inch below, and 0.256 inch below respectively, the averages for the seven preceding years. The mean value for the Quarter was 29.613 inches, which is 0.132 inch below the average for these years. The readings of the barometer during the greater part of the Quarter were remarkable, and will be spoken of presently.*

*The average weight of a cubic foot of Air under the average temperature, humidity, and pressure, was 545 grains; the average for the six preceding years was 549 grains.*

*The rain fallen at Greenwich in January was 1.2 inches; in February was 2.6 inches; and in March was 3.1 inches; the average values for the seven preceding years were 1.9 inches, 1.6 inches, and 1.4 inches respectively. The total amount fallen in the quarter was 7.9 inches, which is 3.0 inches greater than the average for the years 1841 to 1847. I shall presently speak of this large amount of rain.*

*The temperature of the Thames water was 39°3 by day, and 37°0 by night. The water, on an average, was 2°4 warmer than the air.*

*The horizontal movement of the Air was about 168 miles daily, being somewhat more than its average value.*

*The highest and lowest readings of the Thermometer in Air at the height of four feet above the ground, and protected as much as possible from the effects of radiation and rain, were 71°5 and 15°8.*

*The average daily range of the Readings of the Thermometer in Air at the height of four feet, was 11°1, which is 0°8 greater than the average range for the seven preceding years.*

*In January the Readings of the Thermometer on grass were at or below 32° on 27 nights, and the lowest reading was 12°5. In February it was at or below 32° on 14 nights, and the lowest reading was 20°. In March it was at or below 32° on 21 nights, and the lowest reading was 18°. These low readings have generally taken place at times when the sky has suddenly become clear, and for the most part their periods of continuance have been short, as the amount of clear sky at night during the quarter has been small. The observer at Durham says, that on the night of January 19, the reading of a thermometer on grass fell below zero.*

*The mean amount of cloud for the Quarter was such as to cover upon the average four-fifths of the whole sky. The amount of cloud during the period from 1847, November 30, to 1848, March 31, was larger than in any period of equal length for many years.*

*In the last report I spoke of the smallness of the amount of the electricity which had existed in the air at Greenwich during the Quarter ending 1847, December 31. In consequence of this remark, Francis Ronalds, Esq., the Director of the Observatory at Kew, communicated with me, and he has kindly lent the original Electrical Observations made at that Observatory, both in that quarter and in the one just ended. By an examination of this journal, it appears that during the quarter ending December 31, 1847, the electricity of the atmosphere was never in a neutral state at Kew, excepting for the short period of time in its transmission from the one to the other state. The situation of the Observatory is in the Old Deer Park, at Richmond, and near the river Thames.*

*The electricity during the past Quarter at Greenwich has been about its usual amount at this period of the year. At Kew, the amount has been at all times very much larger than at Greenwich, and there does not appear to have been any period during which the instruments were unaffected.*

*During the quarter there were five exhibitions of the Aurora Borealis, which occurred on the following days, viz., February 20, 22, March 19, 20, and 31. At these times the magnets were disturbed.*



The approximate mean monthly temperatures for other places besides Greenwich are shown in the sub-joined tables, and they differ from those at Greenwich by small quantities only; those places situated south of Greenwich being somewhat higher, and those situated north of Greenwich being lower than at Greenwich, according to the difference of latitude and elevation.

The mean monthly temperatures of the places in Cornwall and Devonshire, in each of these three months, were *above* those of other places. At Exeter, however, the values were intermediate between those at places situated within these counties, and those situated out of them in the same latitude.

On March 29 a remarkable solar halo was seen from many places in England, and in the Isles of Wight, Guernsey, and Jersey. This halo, with its accompanying parhelia, was well seen, and the descriptions of the phenomena from different localities agree better with each other than is usually the case with these optical phenomena. The following are the principal facts:—

1st. A coloured circle, whose diameter was  $22^\circ$ , the centre of which was occupied by the sun; seen by all the observers.

2nd. A colourless circle, whose diameter was  $22^\circ$ , the centre of which was situated a little to the east of the sun; seen by the observers at Guernsey and the Isle of Wight.

3rd. A coloured arc of a circle, of which the sun occupied the centre, whose diameter was  $44^\circ$ ; seen at Oxford.

4th. A large white brilliant circle, whose centre was the zenith, passing through the sun; seen by all the observers.

5th. There were on this circle four parhelia, two of them a little beyond the first mentioned circle, at its intersections with the large white horizontal circle; these were seen by most of the observers.

6th. There were two parhelia, opposite to the sun, the one above, the other below him, at the intersections of the 1st and 2nd described circles; seen at Guernsey.

7th. The 5th and 6th parhelia were white, they were placed on the circumzenithal circle, as near as I can tell, at the points of intersections of a circle with a radius of  $90^\circ$ , with the sun for its centre; these were seen at Christchurch.

8th. At the culminating point of the first mentioned circle there was a bright and coloured arc, which was concave towards the sun; this was seen at Christchurch and Oxford.

9th. The observer at Guernsey\* saw four arcs of circles, one situated on either side of the two first mentioned parhelia, one below the parhelia mentioned in (No. 6), and one near the parhelia situated on the circumzenithal circle in the N.E.; these arcs were convex towards the sun.

10th. There were two coloured arcs of circles, convex towards the sun, and situated at the distance of  $22^\circ$  from the circle first mentioned, the one S.E., and the other S.W. of the sun; the latter of these was seen at Christchurch, and both were seen at the Isle of Wight.

At Stone, near Aylesbury, the observer saw some phenomena at 3<sup>h</sup>. P.M., different in some respects from those seen by the other observers.

1st. The upper part of the circle of  $22^\circ$  radius, of which the sun occupied the centre, was seen, and the colours were vivid.

2nd. There were segments of two circles, about  $95^\circ$  in extent, whose diameters were both  $22^\circ$ , and which cut each other vertically above the sun.

3rd. These segments terminated at the distance of about  $14^\circ$  on each side of the sun, and at these points there were two bright and luminous mock suns. The one on the W. was accompanied by a bright and long ray of light. The phenomena were visible during two hours, and an elaborate drawing was made of the appearances.

The whole of the papers and drawings are deposited in the archives of the Royal Observatory at Greenwich.

\* The appearance of the halo, as seen at Guernsey, was engraved in the Illustrated London News of April 8, 1848:



The following Meteorological Observations made at the Royal Observatory at about the time of the appearance of the halo, are published by permission of the Astronomer Royal.

1848. Day and Hour.	Barometer readings corrected, and reduced to 32°.	Readings of Thermometers.		Tempe- rature of the deduced Dew Point.	Dew Point Temp. below Air Temp.	Weight of Water in a Cubic Foot of Air.	Degree of Humi- dity.	Amount of Clouds.	Direction of Wind.	
		Dry.	Wet.							
March 29, 6 A.M..	in. 29.732	44.8	44.5	44.1	0.7	gr. 3.4	0.973	10	W.S.W.	Overcast; a heavy rain has been falling since March 28d 10h. P.M.
" 9 A.M..	29.767	48.1	47.3	46.4	1.7	3.5	0.632	10	E. by N.	Overcast; no rain falling.
" Noon..	29.783	55.2	49.5	44.9	10.3	3.6	0.707	4	S.S.W.	Cirrostratus near the horizon; the zenith clear.
" 3 P.M..	29.760	58.1	49.9	43.3	14.8	3.5	0.632	4	S.	The zenith, and around it, clear; banks of cumuli near the horizon; the halo visible.
" 6 P.M..	29.733	51.5	46.6	41.7	9.8	3.2	0.700	8	S. by E.	The sky is for the most part covered by thin cirrostratus.
" Midnight	29.709	41.6	40.3	38.6	3.0	2.9	0.901	10	Calm.	Overcast: cirrostratus.
March 30, 6 A.M..	29.659	43.5	43.0	42.	1.2	3.3	0.965	7	S.E.	Cirri, cirrostratus, and haze.
" 9 A.M..	29.662	51.5	50.1	48.7	2.8	4.1	0.903	10	S.E.	Overcast.
" Noon..	29.663	53.5	51.2	48.9	4.6	4.1	0.848	10	S. by E.	Overcast.
" 3 P.M..	29.669	60.5	54.5	50.4	10.1	4.2	0.708	10	S.	Overcast.

From the circumstance of the increasing temperature during the continuance of the halo, both evaporation and the ascending current of air were increasing, and they would be at about their maxima at about 3<sup>h</sup>. P.M. From the numbers in the 5th column, it seems the temperature of the dew point was becoming less as the temperature was increasing, so that the ascending current not only carried with it all the water then evaporating, but also some of that which had evaporated previously. It seems, therefore, highly probable, that at the time of the appearance of the halo the largest quantity of water was mixed with the air in its locality, and also, as at this place the temperature of the air during the day was without change, and probably below the freezing point of water, that the degree of humidity was at the time at a maximum value.

As this halo is one of the best ever observed, and it seems to have been dependent upon the humid state of the air, it is very desirable that observations of the dry and wet bulb thermometers taken at about the time, should be collected together from different places, and I should be glad if such were forwarded to me.

The reading of the barometer during the months of February and March have been remarkable for large fluctuations. Although I have detailed them in the Weekly Reports for these months, it is desirable to mention them here also. On February 1, at 6<sup>h</sup>. A.M., the reading was 29.505 in.; this increased to 30.274 in. by February 3, at 9<sup>h</sup>. A.M. The reading decreased day by day till the 10th, at midnight, when it was 28.598 in.; it then turned to increase, which, during the 11th, amounted to one inch nearly; and at noon, on the 13th, the reading was 29.944 in., when it turned to decrease. On the 15th, at 3<sup>h</sup>. P.M., it was 29.373 in. On the 18th, at 9<sup>h</sup>. A.M., it was 30.333 in., being the highest during the month. On the 20th, at noon, it was 29.288 in., which increased to 29.618 in. at midnight, and continued to increase slowly afterwards till the 21st at 9<sup>h</sup>. A.M., when the reading was 29.684 in., after which it decreased. On the 23rd, at 6<sup>h</sup>. A.M., it was 28.888 in.; at midnight, was 29.229 in.; shortly after this it decreased, and continued to decrease till the 26th at 9<sup>h</sup>. 45<sup>m</sup>. A.M., when the remarkably low reading of 28.299 in. took place, a reading lower than that of the 18th by 2.034 in.; it then turned to increase, but did not pass the point 29 inches till midnight on the 27th, and reached only to 29.343 in. on the 29th at 9<sup>h</sup>. A.M., when it again began to decrease, and by 6<sup>h</sup>. P.M., again decreased below 29 inches. On March 1st, at 9<sup>h</sup>. A.M., the reading was 28.530 in.; it then turned to increase, which during the 2nd, amounted to half an inch nearly. On the 4th, at 6<sup>h</sup>. A.M., the reading was 30.070 in.; on the 5th, at 6<sup>h</sup>. P.M., it was 29.658 in.; on the 8th, at 9<sup>h</sup>. A.M., it was 30.147 in., which was the highest value reached during the month. Early in the morning of the 11th, the reading passed below 29 inches, and decreased to 28.582 in. by 11<sup>h</sup>. A.M. on the 12th. Between this time and the 14th, at midnight, the reading increased to 29.716 in.; it then turned to decrease, and passed the point 29 inches on the 19th at 6<sup>h</sup>. P.M., and to 28.630 in. by 6<sup>h</sup>. A.M. on the 21st; at midnight, on this day, the reading was 29.330 in., the increase in the previous 12 hours having been as large as 0.79 in.; after this time the reading slowly increased to 30.000 in. by the 25th at 9<sup>h</sup>. A.M. Between this time, and the end of the month, the lowest reading was 29.540 in. at midnight on the 27th.

Between February 9 and March 21, the reading of the barometer was below 29 inches on parts of 16 days, 9 of these were in February, and 7 were in March. The average reading for the whole day was below 29 inches on 10 of these days, viz., on February 9, 10, 25, 26, 27, March 1, 11, 12, 20, and 21.



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I have examined the readings of the barometer on every day since 1800, and I find the average number of instances in one year that these readings have been below 29 inches on parts of a day, at the height of 150 feet, is seven. In the years 1829 and 1832 there was no instance of the barometer reading so low as 29 inches. In the year 1809 there were 13 such instances, 6 of which were in December. In 1816 there were 16 cases, 7 of which were in January. In 1817 there were 17 cases, 6 of which were in March. In 1820 there were 17 cases, 12 of which were in October. In 1823 there were 20. In 1824 and 1825 there were 14 in each year; in the latter year there were 8 in November. In 1836 there were 13 instances, 9 of which occurred in February and March; and in 1845 there were 13. Therefore there has not been any similar instance in this century of such a succession of low readings, as 16 cases out of 40 days. The year whose corresponding period most nearly resembles that of the present year in these particulars, is 1836.

The mean reading of the barometer for February and March was 29.51 in., being less than the mean value of any consecutive two months in this century, with the solitary exception of the same two months in the year 1836, whose mean barometer reading was somewhat below that of the present year.

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# MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING MARCH 31, 1848.

Compiled from Observations furnished by the Gentlemen whose names are mentioned in the first column, the Hygrometrical results having been deduced from Glaisher's Hygrometrical Tables.

Year	Month	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Atmosphere of Dry Air	THERMOMETERS										WIND	RAIN		Deductions relative to the Humidity of the Atmosphere					Daily Observations taken at	REMARKS																
							Dry Bulb	Wet Bulb	Temperature of the Dew Point	Self-registering					Average strength 0-6	General Direction		Amount of Clouds 0-10	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean additional weight required to saturate a cubic foot of Air	Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere			Weight of Air in a cubic foot of Air	Height of the station above the Sea in feet														
1848	Jan.	50° 7'	5° 18' W.	29·823	0·234	in.	29·589	in.	29·589	°	38·7	°	36·5	°	54·0	°	24·0	°	43·7	°	33·9	°	38·8	°	9·8	°	30·0	°	1·1	N.	6·7	14	2·9	2·6	0·5	0·840	3·3	519	106	9 A.M.	The air was saturated with moisture on Feb. 4, 5, & 14.	
	Feb.	...	...	29·634	0·259	...	29·335	...	29·335	°	45·2	°	43·5	°	53·0	°	31·0	°	49·7	°	31·3	°	45·5	°	8·4	°	22·0	°	1·7	S.W. & N.W.	6·7	29	7·4	3·5	0·4	0·898	4·2	538	...	3 P.M.		
	Mar.	...	...	29·586	0·279	...	29·307	...	29·307	°	44·0	°	41·5	°	51·0	°	32·0	°	50·2	°	38·6	°	44·4	°	11·6	°	29·0	°	1·6	S.W. & N.W.	5·8	24	4·2	3·2	0·6	0·844	3·9	537	...	9 P.M.		
	Jan.	...	...	29·860	0·245	...	29·615	...	29·615	°	39·0	°	37·9	°	51·0	°	27·0	°	44·1	°	34·7	°	39·4	°	9·4	°	27·0	°	1·6	N.E.	7·8	13	3·2	2·9	0·2	0·936	3·4	550	...	9 A.M.		
	Feb.	...	...	29·640	0·283	...	29·357	...	29·357	°	41·8	°	42·2	°	54·0	°	29·0	°	50·6	°	41·8	°	46·2	°	8·8	°	25·0	°	1·9	W. & S.W.	7·0	24	6·6	3·3	0·6	0·848	3·9	537	...	...		
	Mar.	...	...	29·590	0·269	...	29·321	...	29·321	°	43·9	°	40·7	°	62·0	°	31·0	°	51·8	°	40·1	°	46·0	°	11·7	°	31·0	°	1·8	W.S.W.	7·0	23	4·1	3·1	0·7	0·814	3·7	537	...	...		
	Jan.	50° 17'	5° 4' W.	29·976	...	...	...	...	...	°	...	°	...	°	53·0	°	26·0	°	42·8	°	34·1	°	38·4	°	8·7	°	27·0	°	0·7	E.N.E.	7·2	15	3·5	...	...	...	...	...	9 A.M.			
	Feb.	...	...	29·773	...	...	...	...	...	°	...	°	...	°	52·0	°	31·0	°	49·1	°	41·4	°	45·2	°	7·7	°	21·0	°	1·3	W.S.W.	7·5	21	4·6	...	...	...	...	...	3 P.M.			
	Mar.	...	...	29·735	...	...	...	...	...	°	...	°	...	°	56·0	°	36·0	°	48·7	°	40·7	°	44·7	°	8·0	°	20·0	°	1·3	N.W. & S.W.	7·2	24	4·5	...	...	...	...	...	9 P.M.			
	Jan.	...	...	...	0·218	...	...	...	...	°	38·0	°	36·6	°	53·0	°	26·0	°	42·6	°	35·9	°	39·3	°	6·7	°	27·0	°	2·3	N.E.	...	12	2·4	2·6	0·3	0·884	3·0	551	120	9 A.M.		
	Feb.	...	...	...	0·288	...	...	...	...	°	45·0	°	43·6	°	53·0	°	32·0	°	49·3	°	42·7	°	16·0	°	6·6	°	21·0	°	2·9	S.W.	...	22	3·9	3·3	0·4	0·894	4·0	540	...	...		
	Mar.	...	...	...	0·263	...	...	...	...	°	45·0	°	42·8	°	57·0	°	36·0	°	49·5	°	41·5	°	45·5	°	8·0	°	21·0	°	2·4	S.W.	...	18	3·0	3·1	0·6	0·839	3·6	540	...	...		
	Jan.	50° 45'	3° 41' W.	29·800	0·192	...	29·608	...	29·608	°	36·2	°	34·5	°	52·5	°	19·0	°	39·2	°	31·1	°	35·1	°	8·1	°	33·5	°	1·0	E. & N.	8·0	14	2·1	2·3	0·4	0·838	2·7	547	140	9 A.M.	The wet-bulb thermometer was accidentally broken at the beginning of February.	
	Feb.	...	...	29·620	...	...	...	...	...	°	41·7	°	...	°	54·0	°	24·0	°	48·7	°	38·4	°	43·5	°	10·3	°	30·0	°	1·3	N. & W.	...	19	4·3	...	...	...	...	...	...	...		
	Mar.	...	...	29·490	...	...	...	...	...	°	41·6	°	...	°	63·8	°	31·0	°	51·9	°	37·3	°	44·6	°	14·6	°	32·8	°	1·3	N.	...	22	3·1	...	...	...	...	...	...	...		
	Jan.	50° 50'	0° 9' W.	29·942	0·183	...	29·759	...	29·759	°	33·7	°	32·2	°	48·0	°	15·0	°	35·3	°	31·1	°	33·2	°	4·2	°	33·0	°	...	N.E.	7·5	16	...	2·2	0·3	0·872	2·5	559	60	9 A.M.		
	Feb.	...	...	29·930	0·238	...	29·352	...	29·352	°	40·5	°	38·8	°	49·0	°	25·0	°	42·7	°	37·5	°	39·9	°	4·7	°	24·0	°	...	S.W. & N.E.	7·0	20	...	2·7	0·4	0·868	3·3	545	...	3 P.M.		
	Mar.	...	...	29·648	0·240	...	29·408	...	29·408	°	...	°	39·4	°	55·0	°	30·0	°	44·9	°	38·6	°	41·7	°	6·3	°	24·0	°	...	S.W. & N.E.	6·7	21	...	2·8	0·4	0·884	3·3	549	...	9 P.M.		
	Jan.	50° 50'	0° 46' W.	29·903	...	...	...	...	...	°	...	°	...	°	31·3	°	48·0	°	13·0	°	38·3	°	28·6	°	33·5	°	9·7	°	35·0	N.	...	...	2·0	...	...	...	...	...	9 A.M.			
	Feb.	...	...	29·695	...	...	...	...	...	°	...	°	...	°	38·5	°	52·0	°	25·0	°	46·3	°	36·0	°	41·2	°	10·3	°	...	S.W.	...	...	3·9	...	...	...	...	...	9 P.M.			
	Mar.	...	...	29·650	...	...	...	...	...	°	...	°	...	°	38·9	°	62·0	°	30·0	°	49·3	°	36·6	°	42·9	°	12·7	°	...	S.	...	...	3·6	...	...	...	...	...	9 P.M.			
	Jan.	50° 55'	1° 24' W.	...	...	...	...	...	...	°	...	°	...	°	...	°	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9 A.M.		
	Feb.	...	...	...	...	...	...	...	...	°	...	°	...	°	...	°	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3 P.M.		
	Mar.	...	...	29·647	0·290	...	29·357	...	29·357	°	46·2	°	44·5	°	66·0	°	29·0	°	53·1	°	39·2	°	46·1	°	13·9	°	37·0	°	0·8	N.N.W.	7·3	23	3·4	3·4	0·4	0·885	4·0	539	...	9 P.M.		
	Jan.	50° 59'	0° 5' E.	29·860	0·190	...	29·670	...	29·670	°	33·9	°	33·7	°	52·0	°	19·0	°	37·9	°	28·8	°	33·4	°	6·8	°	38·0	°	...	N.E.	...	10	1·5	2·3	0·3	0·889	2·6	557	180	9 A.M.		
	Feb.	...	...	29·605	0·253	...	29·352	...	29·352	°	42·7	°	41·0	°	54·0	°	24·0	°	48·0	°	37·1	°	42·5	°	10·9	°	30·0	°	...	S.W.	...	18	3·0	2·9	0·5	0·869	3·5	542	...	9 P.M.		
	Mar.	...	...	29·590	0·252	...	29·338	...	29·338	°	43·6	°	41·5	°	67·0	°	26·0	°	51·5	°	36·3	°	43·9	°	15·2	°	41·0	°	...	S.W.	...	20	2·6	2·9	0·6	0·842	3·5	541	...	...		
	Jan.	51° 21'	2° 22' W.	29·700	0·207	...	29·493	...	29·493	°	33·4	°	33·5	°	52·0	°	19·0	°	37·9	°	28·8	°	33·4	°	9·1	°	33·0	°	0·9	S.W. & E.	7·7	11	1·1	2·5	0·0	1·000	2·9	556	265	9 A.M.		
	Feb.	...	...	29·460	0·269	...	29·191	...	29·191	°	42·3	°	41·6	°	54·0	°	20·0	°	48·1	°	35·0	°	41·6	°	13·1	°	34·0	°	1·6	S.W.	...	6·8	23	3·2	3·2	0·2	0·937	3·7	539	...	3 P.M.	
	Mar.	...	...	29·410	0·263	...	29·147	...	29·147	°	42·8	°	41·6	°	70·0	°	26·0	°	50·0	°	35·0	°	42·5	°	15·0	°	44·0	°	1·3	W.	...	6·7	21	3·2	3·1	0·2	0·927	3·6	538	...	9 P.M.	
	Jan.	51° 31'	0° 0'	29·816	0·182	...	29·634	...	29·634	°	34·6	°	32·6	°	50·4	°	15·8	°	38·1	°	29·8	°	33·1	°	8·3	°	34·6	°	...	...	8·4	9	1·2	2·2	0·3	0·837	2·5	556	159	Every 3h except 8 A.M. & 9 P.M.		
	Feb.	...	...	29·517	0·257	...	29·260	...	29·260	°	43·4	°	41·6	°	55·0	°	30·7	°	48·7	°	38·0	°	43·4	°	10·7	°	24·3	°	...	...	7·5	19	2·6	3·0	0·5	0·864	3·6	540	...	...		
	Mar.	...	...	29·505	0·252	...	29·253	...	29·253	°	43·8	°	41·6	°	71·5	°	27·3	°	50·7	°	36·4	°	43·6	°	14·3	°	44·2	°	...	...	8·0	21	3·1	2·9	0·6	0·839	3·5	539	...	9 P.M.		
	Jan.	51° 31'	0° 0'	29·880	0·198	...	29·682	...	29·682	°	34·2	°	33·3	°	50·9	°	16·8	°	38·1	°	31·5	°	34·8	°	6·6	°	34·1	°	...	N. & N.N.E.	8·6	12	1·1	2·4	0·2	0·923	2·7	557	107	8 A.M.	Solar halos were seen on Feb. 16, 19; March 18, 28, and 29.	
	Feb.	...	...	29·590	0·263	...	29·327	...	29·327	°	42·7	°	41·4	°	52·7	°	30·0	°	48·1	°	39·6	°	43·9	°	8·5	°	24·7	°	...	...	7·0	19	3·1	3·1	0·4	0·907	3·6	542	...	6 P.M.	Lunar halos were seen on Jan. 18; Feb. 12, 14, 15, 16, 18, 19; Mar. 10, 20, and 21.	
	Mar.	...	...	29·542	0·259	...	29·283	...	29·283	°	42·9	°	41·3	°	67·3	°	29·0	°	49·5	°	38·7	°	44·1	°	10·8	°	38·3	°	...	...	7·9	21	3·3	3·0	0·4	0·886	3·6	540	...	...	Aurora Borealis were seen on Feb. 22; Mar. 19 and 20.	
	Jan.	51° 31'	0° 0'	29·880	0·198	...	29·682	...	29·682	°	34·2	°	33·3	°	50·9	°	16·8	°	38·1	°	31·5	°	34·8	°	6·6	°	34·1	°	...	N. & N.N.E.	8·6	12	1·1	2·4	0·2	0·923	2·7	557	107	8 A.M.		
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	Mar.	...	...	29·542	0·259	...	29·283	...	29·283	°	42·9	°	41·3	°	67·3	°	29·0	°	49·5	°	38·7	°	44·1	°	10·8	°	38·3	°	...	...	7·9	21	3·3	3·0	0·4	0·886	3·6	540	...	...		



I have examined the readings of the barometer on every day since 1800, and I find the average number of instances in one year that these readings have been below 29 inches on parts of a day, at the height of 150 feet, is seven. In the years 1829 and 1832 there was no instance of the barometer reading so low as 29 inches. In the year 1809 there were 13 such instances, 6 of which were in December. In 1816 there were 16 cases, 7 of which were in January. In 1817 there were 17 cases, 6 of which were in March. In 1820 there were 17 cases, 12 of which were in October. In 1823 there were 20. In 1824 and 1825 there were 14 in each year; in the latter year there were 8 in November. In 1836 there were 13 instances, 9 of which occurred in February and March; and in 1845 there were 13. Therefore there has not been any similar instance in this century of such a succession of low readings, as 16 cases out of 40 days. The year whose corresponding period most nearly resembles that of the present year in these particulars, is 1836.

The mean reading of the barometer for February and March was 29.51 in., being less than the mean value of any consecutive two months in this century, with the solitary exception of the same two months in the year 1836, whose mean barometer reading was somewhat below that of the present year.

Usually a period of many years passes between two readings of the barometer so low as 28.3 in. In the last quarter I spoke of the remarkably low reading of 28.383 in. as occurring on December 7 at 3<sup>h</sup>. A.M.; it will be seen from the preceding accounts, that on February 26, at 9<sup>h</sup>. 45<sup>m</sup>. A.M., the reading was lower than that in the preceding December, being 28.299 in. This circumstance, in addition to the other successive low readings, render this period one of the most remarkable in a meteorological point of view; and an investigation of the several successive barometrical waves, would be highly instructive. The returns I have received do not enable me to indicate the direction of motion of a single wave. The observer, at Stonyhurst, says—on February 27, at 1<sup>h</sup>. P.M., the reading of the barometer was the lowest during the quarter, being 28.140 in.; and during the period between February 22 and March 1, the reading was always below 28.8 in.

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It appears, therefore, that the great fluctuations of the readings of the barometer have been general.

The unusual meteorological character of the period which we have just experienced, together with its influence on the public health, makes it an object of general interest to trace the cause of so remarkable a phenomenon. To enable persons who have time at their disposal for this investigation, I have detailed the principal meteorological facts for England for the period, and which may be briefly mentioned as exhibiting an excess of temperature for the six months ending 1848, March 31, of 2°55 upon the average for the same period from the seven preceding years. An excess remarkable both for its amount and continuance. During the past quarter, the amount of water mixed with the air has been about its average value, although in consequence of the high temperature, the humidity of the air has been less. We have had an unusual prevalence of S.W., W.S.W., and S.S.W. winds at this season, when they are usually replaced by dry and cold N. and N. E. winds. The air has been in frequent rapid motion, and during the period between January 22 and March 4, it passed over Greenwich at the rate of 220 miles daily.

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MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING MARCH 31, 1848.

Compiled from Observations furnished by the Gentlemen whose names are mentioned in the first column, the Hygrometrical results having been deduced from Glaisher's Hygrometrical Tables.

Year	Months	Latitude	Longitude	THERMOMETERS										WIND	RAIN		Deductions relative to the Humidity of the Atmosphere				Daily Observations taken at	REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
				Atmosphere of Dry Air				Tempera- ture of the Dew Point		Self-registering					Average strength 0—6	General Direction	Amount of Clouds 0—10	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air			Mean additional weight of Vapour required to saturate a cubic foot of Air	Humidity of the Atmosphere	Weight of a cubic Foot of Air	Height of the station above the Sea in feet																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
1848				Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Air	Dry Bulb	Wet Bulb	Mean of daily Observations	Deduced	Observed	Highest during the month	Lowest during the month	Mean of the high- est on each day	Mean of the low- est on each day	Approximate mean temp. of the month	Average daily range of the Thermometer readings	Range of the Thermo- meter in the month																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			



Year	Months	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS				WIND		RAIN		Deductions relative to the Humidity of the Atmosphere					Remarks taken at																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
							Dry Bulb	Wet Bulb	Temperature of the Dew Point	Self-registering	Average strength 0—6	General Direction	Amount of Clouds 0—10	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean additional weight of Vapour required to saturate a cubic foot of Air	Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere		Weight of a cubic foot of Air	Height of the Station above the Sea in feet																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1848	Jan.	51° 31'	0° 6' W.	29.701	0.202	29.498	34.5	33.7	32.4	51.7	17.0	38.1	30.4	34.2	7.7	34.7	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	







## QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES	Mean pressure of the Atmosphere of Dry Air reduced to the level of the Sea	Mean temperature of the Air	Highest reading of the Thermometer	Lowest reading of the Thermometer	Mean daily Range of Temperature	Range of the Thermometer	WIND		Mean amount of Cloud 0—10	RAIN		Mean weight of Vapour in a cubic foot of Air	Mean additional weight required to saturate a cubic foot of Air	Mean degree of humidity	Mean whole amount of Water in a vertical column of Atmosphere	Mean weight of a cubic foot of Air.	Height of cistern of the Barometer above the level of the Sea.
							Mean estimated strength 0—6	General Direction		Number of days on which it fell	Amount collected						
ton .....	29.542	42.4	61.0	24.0	9.9	37.0	1.5	S.W.	6.4	67	12.7	3.1	0.4	0.877	3.7	542	106
outh .....	.....	42.2	62.0	27.0	10.0	35.0	1.8	W.S.W.	7.3	60	13.9	3.1	0.6	0.843	3.7	540	....
.....	.....	42.2	56.0	26.0	8.1	30.0	1.0	Variable	7.3	60	14.7	.....	.....	.....	.....	.....	.....
ay .....	.....	43.1	57.0	26.0	7.1	31.0	2.5	S.W.	..	52	9.3	3.0	0.4	0.870	3.6	...	120
er .....	.....	40.5	63.8	19.0	11.0	44.8	1.2	N.	..	55	9.5	.....	.....	.....	.....	.....	140
aton .....	29.549	37.7	55.0	15.0	5.1	40.0	..	S.W. & N.E.	6.4	57	..	2.5	0.3	0.888	3.0	549	60
hester .....	.....	38.7	62.0	13.0	10.9	49.0	..	S.W.; N. & S.	..	..	9.5	.....	.....	.....	.....	.....	.....
hampton .....	.....	..	..	..	..	..	..	.....	..	..	.....	.....	.....	.....	.....	.....	.....
field .....	29.526	39.6	67.0	11.0	10.5	56.0	..	S.W.	..	48	7.1	2.8	0.4	0.880	3.3	545	180
ington .....	29.516	38.6	70.0	19.0	12.4	51.0	1.3	S.W.	7.1	58	9.5	2.9	0.3	0.969	3.4	545	265
Observatory Greenwich ..	29.582	39.5	71.5	15.8	11.1	55.7	..	S.W.	8.0	49	7.9	2.7	0.5	0.847	3.2	545	159
enstone Hill, Greenwich ..	29.562	40.4	67.3	16.8	8.6	50.5	..	S.W.	7.8	52	7.5	2.8	0.3	0.899	3.4	546	107
sham .....	.....	40.0	71.5	17.0	10.6	54.5	..	.....	7.9	..	..	2.8	0.3	0.889	3.4	....	40
orth .....	29.464	40.6	69.0	18.0	8.0	51.0	3.5	S.W.	8.2	52	6.2	2.8	0.4	0.875	3.3	543	32
ohn's Wood, London .....	.....	40.5	..	..	9.8	..	..	.....	..	53	7.6	2.8	0.4	0.881	3.4	544	....
er Rectory .....	29.527	37.7	67.0	16.0	12.7	51.0	1.1	Variable	7.7	52	10.0	2.7	0.3	0.914	3.3	542	300
bury .....	29.448	38.6	65.0	15.0	12.2	50.0	0.8	S.	7.5	50	8.7	2.8	0.3	0.913	3.3	540	280
Observatory .....	.....	38.4	68.0	16.5	11.8	51.0	1.2	S.W.	7.2	45	6.8	2.6	0.4	0.862	3.1	541	....
well House .....	29.557	39.2	61.0	16.0	16.0	45.0	1.1	S.W.	7.1	..	..	2.9	0.1	0.975	3.4	544	300
on Walden .....	.....	38.5	66.0	19.0	10.7	47.0	3.4	Variable	6.3	60	6.7	2.6	0.3	0.862	3.1	....	....
Cottage, Hereford .....	.....	39.4	55.5	23.0	..	32.0	..	S.W.	..	32	10.5	.....	.....	.....	.....	.....	.....
ington .....	.....	38.4	60.0	18.0	10.3	42.0	..	S.W.	6.6	46	6.6	2.8	0.3	0.909	3.3	546	....
e .....	.....	39.9	68.0	15.0	9.3	53.0	..	S.E. & S.W.	..	40	7.2	.....	.....	.....	.....	.....	200
ich .....	29.537	39.2	66.0	17.0	8.0	49.0	..	S.W. & N.W.	..	51	6.2	2.6	0.7	0.802	3.1	545	39
.....	29.472	38.6	61.0	11.0	11.8	50.0	..	N.W. & W.S.W.	..	56	11.8	2.7	0.4	0.902	3.3	541	....
field House, Notts. ....	29.528	39.8	69.8	16.0	9.4	53.8	2.0	S.W. & N.W.	7.5	71	8.4	2.7	0.4	0.882	3.2	546	103
pool Observatory .....	29.516	41.2	54.5	20.7	6.4	33.8	1.2	W.	6.3	52	7.9	2.6	0.4	0.872	3.1	548	37
field .....	29.526	39.5	61.0	11.0	9.6	50.0	..	W.S.W.	..	..	..	2.7	0.3	0.892	3.2	545	113
hurst Observatory .....	29.449	37.7	64.2	12.2	11.3	52.0	0.5	S.W. & N.E.	8.0	57	15.0	2.6	0.3	0.898	3.1	539	381
.....	29.512	37.2	57.0	6.0	12.7	51.0	0.4	N.W. & S.W.	..	63	9.5	2.9	0.1	0.979	3.4	545	148
.....	.....	37.2	61.0	15.0	9.3	46.0	..	N.W. & S.E.	..	52	9.3	.....	.....	.....	.....	.....	50
inargal House, Scarva, } reland .....	.....	37.8	56.2	23.0	7.0	33.2	1.7	S.W.	8.5	45	10.9	2.7	0.2	0.931	3.2	....	162
haven .....	.....	40.1	55.5	15.0	8.5	40.5	2.2	S.W.	..	59	16.1	2.7	0.3	0.883	3.3	543	....
am .....	29.483	37.6	57.2	3.8	8.8	53.4	1.9	S.W.	6.4	38	7.5	2.6	0.1	0.964	3.0	544	340
astle .....	29.435	38.6	58.5	9.5	10.0	49.0	..	S.W.	..	41	11.8	2.8	0.2	0.939	3.0	544	121
er of Column .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

from the numbers in the first column it seems that the volume of dry air was the same at all parts of the country. The mean of all these results is 12 inches, and this value may be considered as the pressure of dry air for England during the Quarter ending March 31, 1848.

from the numbers in the second column, we find for the Quarter ending March 31, 1848, that the mean temperature of the air for the counties of Cornwall and Devonshire was 42°1, and for the remaining places, excepting Brighton, Liverpool, and Whitehaven, was 38°9.

the average daily range of the temperature of the air in Cornwall and Devonshire was 9°2; at Brighton, Liverpool, and Whitehaven was 6°7; at Brighton was 5°1 only, and seems to be too small; at places situated between the latitudes of 51° and 53° was 11°0, except at London where the range was 8°9 only; and at all places N. of 53°, was 10°3.

the greatest mean daily ranges took place at Hartwell, Latimer, Leeds, Beckington, Aylesbury, &c., and the least occurred at Brighton, Liverpool, Torquay, &c.

the highest reading during the quarter was at Greenwich and Lewisham, which was 71°5, and the lowest was at Durham, which was 3°8. The range of temperature in England, during the quarter, was therefore 67°7.

the average quarterly range of the reading of the Thermometer in Cornwall and Devonshire was 35°6; at Brighton, Liverpool, and Whitehaven, 41°1; at those places situated between the latitudes of 51° and 52° was 51°3; and between the latitudes of 52° and 55° was 46°3.

the mean direction of the wind was S.W. At Exeter it was N., but this is probably wrong.

from the numbers in the ninth column the distribution of cloud seems to have been the same in amount nearly at all parts of the country, and such have covered about three-fourths of the sky. The actual amount I believe to have been greater than three-fourths.

the fall of rain during the quarter has greatly exceeded the average amount for the season, and it has fallen on a greater number of days than usual. At Helston, on 67; at Leeds, on 63; at Falmouth, Truro, and Saffron Walden, each 60. The places at which the least number of days were hereford, Durham, Thwaite, Newcastle, &c. The places at which the largest falls have taken place, are Whitehaven, Stonyhurst, Truro, Falmouth, Helston, Derby, Newcastle, &c.; and the places where the fall has been the least in amount, are Walworth, Saffron Walden, &c., generally the fall has been much smaller on the E. coast than on the W. coast. The average amount for the quarter in Cornwall and Devonshire was 12 inches, at places situated between 51° and 53° was 8.2 inches, and at places N. of 53° was 10.7 inches.

columns 12 to 16 contain the mean hygrometrical results, and they are as nearly identical as can be expected from uncomparisons of instruments. At Helston, the air seems to have been near saturation. At Hartwell, the results cannot be correct; these instruments, however, are to be shortly compared with standards. At Leeds the results are evidently erroneous, the instruments here are to be replaced by new ones. Omitting the results from these we find that

mean weight of vapour in a cubic foot of air for England (excepting Cornwall and Devonshire) in the quarter ending March 31, 1848, was 2.7 grains

mean additional weight required to saturate a cubic foot of air ..... do was 0.3 grains

mean degree of humidity ..... do was 0.888

mean amount of vapour mixed with the air would have produced water, if all had been precipitated at one time on the surface of the earth, to the depth of ..... do was 3.25 inches

these values for Cornwall and Devonshire were 2.7 grains; 0.5 grain; 0.863 gr.; and 3.6 inches

the results from the station in Ireland, depending on the temperature of the air, the direction of the wind, and the amount of clouds, agree with the results from England at the same latitude; but the results which depend on the humidity of the air, and the amount of rain, exhibit an excess over those from England, and the daily and monthly ranges of the readings of the thermometer are less than those in England.







# RETURN

OF THE

## Mortality in 117 Districts of England,

For the Quarter ending June 30th, 1848.

ANNUAL SERIES VII.] PUBLISHED BY AUTHORITY OF THE REGISTRAR GENERAL. [1848.—No. 2.

### STATE OF THE PUBLIC HEALTH IN THE SECOND QUARTER OF THE YEAR 1848.

“The Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6612958 in 1841.”

It is gratifying to observe a very remarkable improvement in the state of the public health. The number of deaths registered in the three months ending June 30th, was 46552; which is less by 11158 than were registered in the winter quarter of the present year, and less by 5033 than were registered in the corresponding quarter ending the last day of June, 1847. The mortality of the country, after having been excessively high during the latter half of the year 1846, the whole of 1847, and the first quarter of 1848, is now little above the average of the nine years 1839—47. The mortality, however, is still much higher than it was in the spring quarter (April, May, and June,) of 1844, when the number of deaths was only 38977; which, taking the increase of population into account, implies a lower rate of mortality than has been experienced in the spring season of any other year. The changes in the mortality of the parts of the country making the returns may be traced in the subjoined tables.

	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
Deaths registered in the June Quarters of } 10 years .....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,737	51,585	46,552
Deaths which would have been registered if the } mortality had been uniform, and the Num- } bers had increased from 1839 at the rate } of 1.75 per cent. annually. ....	39,029	39,712	40,407	41,115	41,834	42,566	43,311	44,069	44,810	45,625
UNHEALTHY SEASONS Difference above the calculated number .....	2,215	2,362	..	..	..	..	..	..	6,745	927
HEALTHY SEASONS Difference below the calculated number .....	..	..	1,274	2,546	1,491	3,589	2,464	332	..	..

DEATHS REGISTERED in each of the Four Quarters of the Nine Years 1839—1847, and in the Two First Quarters of the Year 1848, in 117 of the DISTRICTS of ENGLAND and WALES.

Quarters ending .....	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
March .....	42,410	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
June .....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,737	51,585	46,552
September .....	37,317	39,498	36,058	39,409	36,953	38,933	36,139	51,427	49,479	....
December .....	41,740	44,186	39,292	39,662	42,608	44,080	39,291	53,093	57,925	....
TOTAL .....	162,711	172,134	161,450	162,543	163,652	168,126	166,273	192,107	215,094	

The state of the weather during the quarter is displayed in the remarks of Mr. Glaisher, who has with great care and labour arranged, and analysed the meteorological returns with which I have been favoured by observers in the country. (See pp. 15—23.)

In *London* the deaths in the quarter were 12945; the deaths in the preceding quarter were 16455; in the quarter ending December, 1847, when influenza prevailed, 19605. Influenza has almost disappeared; it was the cause of death in only 50 cases during the 13 weeks ending in June. Small pox was fatal to 381 persons in London; measles to 306; *scarlatina* to 816; whooping cough to 449; purpura and scurvy to 12; typhus to



882; erysipelas to 129. *Small pox, scarlatina, and typhus* were prevailing epidemics in London. Scarlatina in one week destroyed 107 lives. Typhus was at a maximum (1279) in the last quarter of the year 1847; it is now declining; but it is invariably longer in the epidemic form than other diseases of the class. The diseases of the tubercular class—namely, scrofula, tabes, consumption, and hydrocephalus, fluctuate very little; to them 2640 deaths were ascribed in the June quarter of 1841, and 2403 in the June quarter of 1848; which were the highest and lowest numbers returned in the 8 years 1841—8. Diseases of the lungs declined rapidly; they were the cause of 176 deaths in the first week, of 76 deaths in the last week of the quarter.

The improvement in the health of Liverpool is remarkable; while there were 4809 deaths in the June quarter, 1847, there were only 1907 deaths in the June quarter of 1848. In Manchester, Birmingham, and Leeds, there has also been some improvement.—(See Table below.)

Small pox, and scarlatina, have been the prevailing epidemics throughout the country.

The Registrar of the *Eastern sub-district* of Bolton says:—

“The malignant fevers which have been so prevalent here have almost vanished, and the number of deaths continues to diminish. The town generally appears to be in a healthy state. A fall in the price of provisions has probably had a favourable effect.”

The Registrar of Wigan after observing that there is a great decrease in the deaths, says:—

“This result may be attributed in a great measure to the decrease in the influx of Irish vagrants who brought disease with them into the town.”

The Registrar of St. George, Manchester, says:—

“Typhus, so prevalent during the last 15 months, has considerably abated. The poor people in the district are now more employed and better fed. This may account for the decline of fever, and consequent decrease of mortality.”

The Registrar of Market Street, Manchester, makes a similar statement:—

“In the workhouse, New Bridge Street, 82 deaths were registered. In the corresponding quarter of last year, 199 deaths were recorded in that establishment. The almost universal want of employment amongst the labouring population and the high price of food occasioned severe privation, and no doubt greatly induced the spread of disease, and augmented the number of workhouse inmates at that period. At the fever hospital, Long Millgate, only 27 deaths have taken place, and the fever cases are so few, that the hospital is at this time entirely closed. During the quarter just ended, 52 persons died in the Royal Infirmary, on 24 of whom inquests were holden. Upon the whole, the district may be pronounced healthy in an unusual degree, the number of deaths being fewer than in any preceding quarter for a lengthened period.”

The deaths in London from diarrhoea, dysentery, and cholera, were 11, 23, 13, and 14, in the first four weeks; 27, 31, 37, and 51 in the last four weeks of the quarter. The mortality from these diseases is somewhat higher than it was in the corresponding weeks of 1847. The deaths ascribed to cholera in the June quarters of the eight years 1841—8, were, 1, 7, 8, 9, 2, 9, 4, 17; in the last year therefore, though the deaths are not numerous, there is a slight excess.

These three diseases are always most common in the three months, of July, August, and September, when the temperature is highest. The popular error which ascribes them to fruit was referred to last year.

#### DEATHS from TYPHUS in LONDON.

Quarters ending	March	June	September	December
1846	410	364	403	619
1847	442	568	895	1279
1848	922	882	....	....

#### DEATHS REGISTERED IN

LONDON					MANCHESTER				
Quarters ending in	March	June	September	December	Quarters ending in	March	June	September	December
1846	12518	11423	12601	13221	1846	1527	1611	2354	2318
1847	15289	12361	13187	19605	1847	2185	2362	2783	2210
1848	16455	12945	....	....	1848	2079	1746	....	....
LIVERPOOL					BIRMINGHAM				
1846	1934	2093	2946	2735	1846	876	842	1627	1341
1847	3068	4809	5669	3725	1847	1187	1263	1161	1795
1848	2934	1907	....	....	1848	1660	1135	....	....



That it is an error is established by the fatality of these diseases to infants at the breast, to the aged, to persons in prison and public institutions who procure no fruit, and by many such facts as the following, reported about the middle of the last century, by Sir John Pringle, in his classical account of the diseases of the campaign in Germany.

“ Nearly half the men were ill or had recovered from dysentery a few weeks after the battle of Dettingen, which was fought on the 27th of June, 1743. The dysentery, the constant and fatal epidemic of camps, began sooner this season than it did in any succeeding campaign. Now, as the usual time of its appearance is not before the latter end of the summer, or the beginning of autumn, the cause has been unjustly imputed to eating fruit in excess. But the circumstances here contradict that opinion; for this sickness began and raged before any fruit was in season, except strawberries, (which from their high price, the men never tasted), and ended about the time the grapes were ripe; which growing in open vineyards were freely eaten by every body.

“ To this add the following incident. Three companies of *Howard's* Regiment, which had not joined us, marched with the King's baggage from *Ostend* to *Hanau*, where arriving a night or two before the battle, and having orders to stop, encamped for the first time, at a small distance from the ground, that was afterwards occupied by the army. These men had never been exposed to rain, or lain wet; by this separation from the line, they were also removed from the contagion of the privies; and having pitched close upon the river, they had the benefit of a constant stream of fresh air. By means of such favourable circumstances, it was remarkable, that while the main body suffered greatly, this little camp almost entirely escaped,\* though the men breathed the same air, the contagious part excepted, eat of the same victuals, and drank of the same water. This immunity continued for six weeks, until the army removed from *Hanau*, when these companies joined the rest, and encamping in the line, were at last infected; but suffered little, as the flux was then so much on the decline.—*Pringle on Diseases of the Army*, 3rd. Ed. 1761, pp. 20—21.

Fruit, potatoes, and green vegetables are essential parts of the food of man; and it is only when taken to excess, that like other articles of diet, they disorder the stomach.

There is as yet in England no trace of the epidemic of cholera which is ravaging Russia, from Moscow to St. Petersburg, and ascending the Danube. It raged in the summer of 1831, seventeen years ago, at St. Petersburg, reached Sunderland in October, London in February, 1832, Paris in March of the same year. Whether it will pursue the same course now, travel at the same rate, and be less or more fatal, must depend on a variety of circumstances. If the visitation cannot be arrested, it is greatly to be wished that it should be deferred; for though enlightened communities have before been too much in the habit of postponing sanatory arrangements, and only commencing them when the plague is actually destroying them,—which is very like admitting the enemy within the city walls and then putting the fortifications in repair—it is certain that the great capitals of the continent were never in a worse condition to withstand an epidemic, than they are at the present time.

That much remains to be done in English towns is evident from what is observed in London. It is one of the best established truths in medical science—confirmed by the experience of the army, the navy, the prisons, the town and country districts of England, that pure water and pure air are necessities of life; and in the supply of these, London, though in a much better position than other places, is still deficient. The vestry of St. Marylebone, the largest and wealthiest parish in London, to which we last year called attention, subsequently appointed a committee to inquire into the condition of their constituents. The committee drew up a valuable report in which they state among other things that:—“ There are 583 streets or ways in the parish of St. Marylebone,”—and though formerly sceptical, and not very well informed, their information is now satisfactory and complete—“ Your committee have through the parish surveyor obtained now for the first time a complete knowledge of the state of the sewers of this great parish, and they are compelled to declare that it is manifestly insufficient for the wants of the locality, no fewer than ONE HUNDRED and NINETY-ONE streets or ways in the parish being WHOLLY WITHOUT PROPER SEWERAGE, and a great portion of the remainder DEFECTIVE OR INCOMPLETE.\*\*\*\*\* Your committee have to report another nuisance of a most pestilential character, over which they have not the slightest control, viz:—the gully holes opening into the sewers. Of these, there are no less than 2732 in the parish, and your committee feel that the number of these pest-holes has been increased, as the streets were built without the smallest reference to their previous situation and requirement, and without any regard to their noxious effects.” There does not in fact appear to be any valid reason why these “ gully holes ” should open under the noses of people; when the gases generated inevitably in the present sewers may be so easily carried up the sides of the chimneys, over the houses into

\* I heard of only one man that was taken ill of the bloody flux



the smoke. The committee accounts for this state of things in its own way:—"It must be attributed entirely to the fact, that the rate-payers have no voice at the Board of Commissioners of Sewers." The water supply is pronounced defective; the water is only "on" for about an hour three days a week. The Report says:—"The West Middlesex Company who brought their water into the parish under the express pretence of defeating monopoly, of giving a cheaper and purer supply, after a few years entered into an agreement with the other companies, parcelled out the metropolis into districts, and placed the whole community at the mercy of this giant monopoly, both as regards supply and price."\* It is always so: the supply of water is a thing in which there can be no permanent competition.

The committee throws all the blame which the sewers and water-supply, suggest on other bodies; the vestry has the control of the "dust" and cleansing. This, though touched tenderly by the committee, is admitted to be in an unsatisfactory condition.

"Regarding the removal of the dust. Your committee find, in many places through the parish, accumulation of dust in the yards and cellars of the houses, and there is a very general complaint of the dustmen refusing to remove the same unless they are PAID for so doing." For "dust" which is innocuous, read, the refuse of the kitchen, and all varieties of putrefying vegetable and animal matter: which were then only removed when paid for in some way or other; and are even now never removed at all, but at the request of the inhabitants, who in the worst parts are not very intolerant of dirt.

These facts are not adduced to throw any special censure on the vestry of St. Marylebone; who, as well as their officers, have, since the report of their committee, evinced a laudable anxiety to do their duty to the constituency, and to improve the health of the district. The report of Marylebone exhibits a fair specimen of the condition of London; and must undeceive those who suppose that the houses are drained—or that the rich and middle classes, to say nothing of the poor of London, are adequately supplied with the means of cleanliness, and enjoy the benefit of a pure salubrious air. Other towns in England are comparatively in a worse condition; the continental cities are still more insalubrious; and judging from the analogy of the last epidemic they will suffer much more than London; but it is little satisfaction to the inhabitants of London to run the risk of dying by thousands, while their neighbours die by tens of thousands—when they know that the danger to their health and lives may be diminished to a great extent, by simple and obvious precautions. It may be a difficult, but it is assuredly not an impossible problem in engineering—to supply every house in London with abundance of pure water—and to remove all dirt by scavengers and sweet drains. And these simple arrangements would render it possible for the population to be cleanly.†

A part of the mortality which men experience in early life is perhaps inevitable; but this natural mortality cannot exceed the mortality in some of the districts of England, comparatively healthy, where parts of the population are, exposed to privation, and injuries of various kinds. Now, in parts of Surrey, and Devonshire, about 3 or 4 in 10 children under 5 years of age die annually; in Lewisham, the healthiest district of London the annual mortality is 4, and 5 in 10 annually; in nearly every district of London the mortality of children, is double the mortality in the country; in many districts the mortality is triple the mortality which some persons may consider natural to mankind. Of 1000 men between the ages of 45 and 55 living in a healthy district of England about 12 die annually; in nine districts of London the annual deaths among the same number of men at the same age varies from 30 to 33. This is fully established by the facts in my Eighth Report, recently published; from which the following Table is extracted.

\* A Report of Committee of the Vestry of St. Marylebone, on the Sanatory Condition of the Parish, pp. 7, 8, 9.

† For some sound practical suggestions in reference to cholera, see the Postscript to the Report on the Capabilities of the Metropolitan Work-houses for the Reception and Treatment of cholera cases.



## ANNUAL NUMBER of DEATHS to 100000 LIVING.\*

DISTRICTS	Under 5 Years of Age		Age 45—55		All Ages	
	100000 Girls	100000 Boys	100000 Women	100000 Men	100000 Females	100000 Males
	Die yearly	Die yearly	Die yearly	Die yearly	Die yearly	Die yearly
Lewisham .....	4663	5317	1646	1849	1613	1839
Hampstead .....	4918	6286	1222	2184	1731	2317
Camberwell .....	5552	6247	1432	2511	1744	2197
Hackney .....	5627	6581	1361	2103	1734	2204
Wandsworth .....	5661	5989	1488	2167	1835	2114
Islington .....	5737	6891	1957	2115	1843	2144
Poplar .....	6441	7896	2016	2458	2150	2666
Greenwich .....	6460	7633	2010	2507	2203	2561
Newington .....	7013	8804	1737	2520	2126	2514
Pancras .....	7233	8580	1877	2368	2051	2392
(a) Kensington (b) Chelsea .....	7262	8306	1726	2873	2011	2663
Stepney .....	7301	8162	2049	2603	2254	2579
Lambeth .....	7499	9004	1984	2527	2155	2500
City of London .....	7745	10141	2093	2974	2018	2255
St. George, Hanover Square .....	7965	8690	1630	2280	1642	1990
LONDON .....	8026	9280	2001	2720	2308	2736
Shoreditch .....	8040	9110	2096	2714	2406	2609
Bethnal Green .....	8102	9028	1844	2126	2337	2436
Rotherhithe .....	8199	8699	1894	3129	2526	3008
Clerkenwell .....	8383	9540	2162	2693	2310	2526
Bermondsey .....	8460	10012	1797	2659	2497	2780
Marylebone .....	8469	10031	1922	2713	2051	2493
Strand .....	8534	10688	2213	3208	2330	2454
St. Martin-in-the-Fields .....	9140	12059	1999	2755	2254	2545
St. James, Westminster .....	9286	10794	2090	2543	2029	2204
St. Luke .....	9319	10894	2442	2878	2713	2808
Westminster .....	9428	10122	2044	3004	2496	2699
St. George-in-the-East .....	9470	10169	2356	3158	2705	3069
St. George, Southwark .....	9609	10667	2255	3015	2565	2772
(a) East London (b) West London .....	9698	11967	2315	3167	2582	2764
Whitechapel .....	10116	11437	2657	3259	2773	3034
(a) St. Saviour (b) St. Olave .....	10150	11273	2345	3211	2707	2986
Holborn .....	10223	11564	2200	2971	2619	2693
St. Giles .....	10890	12281	2449	3242	2556	2823
(a) Godstone. (b) Reigate. (c) Dorking } (Surrey) .....	3332	4123	1215	1174	1616	1536
(a) South Molton. (b) Torrington. } (c) Crediton. (d) Barnstaple (Devon- } shire .....	3384	3993	945	1185	1563	1668

\* See Registrar General's Eighth Annual Report, pp. xcii., xciv., and cxii. This Table may be read thus: to 100000 Girls living in Lewisham under Five Years of Age, 4663 die annually.

For nearly ten years facts of this kind have year after year been submitted to the public by this office. And that their practical effect might not be entirely lost—instead of giving the bare facts, or leaving the results enveloped in figures, their nature and bearing have been expressed in plain, and sometimes, perhaps, strong language; which those commissioners, vestries, and corporations, who happen to have been offended, will now think excusable. For if they have any regret, it will not be that their attention has been directed to sanitary improvements; but that whole communities, whose fate they have to a certain extent held in their hands—are now living in uncleansed houses—along streets one-third of which are not drained—crowded in fevered cities—while that dark destroying cloud that arose in Asia is looming over Europe.

It is not easy to determine from the vague terms employed in the letters and papers from St. Petersburg, whether cholera is now more or less fatal than it was in the former epidemic, which began on June 14, 1831, and ended in April, 1832; attacked 13905 persons, and was fatal to 9696 in that city.\* It is usual in this country in speaking of the population of St. Petersburg to refer to the province, which according to an official return with which I was favoured by the Russian Government, had in 1842 a population of 405791, or 229427 males, 236364 females, on an area of 15037 English square miles—an area equal to more than one-fourth part of the area of England and Wales (57812 square miles.)

\* The deaths in Petersburg up to July 12th of the present year were 7623. This would imply a much higher mortality than that experienced in the first epidemic. Little dependence however can be placed upon returns, or upon anything else, commenced in the midst of the consternation an epidemic occasions. It is highly desirable that all the great cities in Europe should publish at all times such weekly statements of the mortality, and causes of death as now appear in London. They should be commenced before any epidemic breaks out. Such Tables have been published, however imperfectly, in London ever since the reign of Queen Elizabeth; and were begun at the suggestion of the able statesmen by whom she was surrounded. When simultaneous observations are recorded on an extended scale, it will be possible, with the assistance of a body of trained Health-Officers, to determine the singular laws which regulate the diffusion of zymotic diseases.



The mortality of this province was 4.417 per cent. among males, 3.770 per cent. among females in 1842. The province of Petersburg contains nine large districts, the district of Petersburg proper contained only 28911 inhabitants; 15519 males, 13392 females, among whom the deaths in 1842 were 83 males, 628 females.

The government or province of Moscow — on an area of 11688 English square miles, had in 1842 1398977 inhabitants, 740517 males, 658460 females: the deaths among males were 26648, females 26418 in 1842; the mortality of males was 3.599 per cent., of females 4.010 per cent. The district of Moscow had 455644 inhabitants, (with which it is usual to compare very erroneously the population of the province of St. Petersburg): the males were 275328, females 180316; the deaths of males 6950, females 6678, in 1842.

The mortality in 1842 of females in the province of Moscow was 4.010 per cent.; of females in the district of Petersburg 4.689; the mortality of females in London within the Tables of Mortality in the same year was 2.220.\* Petersburg and Moscow are in nearly the same sanatory condition as London was in the 17th and 18th centuries; and under any circumstances the mortality from cholera in London, or in the other cities of the United Kingdom will probably not approach the mortality in Petersburg, where the mortality was raised 84 per cent. in 1831—2, when the church burials in London were raised from 38794 in 1831, to 43082, or 11 per cent. The deaths in Paris were raised by cholera from 31115, in 1831, to 53382 in 1832, or nearly 72 per cent. 18602 deaths were ascribed to cholera in the official returns. The scanty supply of water, the bad drainage, the filthy state of the privies, (which can scarcely be conceived), the wretchedness of the poor, who have no poor law to fall back on—sufficiently account for the devastation of cholera in Paris sixteen years since, and sanatory improvement is unfortunately one of those practical questions which not appealing to the imagination, has hitherto attracted little public attention in France.

## COMPARATIVE METEOROLOGY OF THE SPRING QUARTERS OF THE YEARS 1846, 1847, & 1848

The 13 Weeks ending	Years	THERMOMETERS														In the Water of the Thames at Greenwich by the Self Registering Thermometer read at 9 o'clock.				Difference between the dew point temperature and air temperature			WIND				The mean weekly amount of Horizontal movement of the air	Mean amount of Clouds 0-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Mean						Dew Point	Self-Registering				MEAN		Mean of the greatest on each day	Mean of the least on each day	Difference between the mean temperature of the quarter, and the mean temperature of the same quarter on an average of 25 years	Pressure in lbs. on the square foot																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Highest during the quarter		Lowest during the quarter		Of the Highest on each day			Of the Lowest on each day		Difference in degrees							Mean of all observations		Mean of all results	Highest in the sun		Lowest on the grass		General direction	Greatest pressure in the quarter			Mean for the quarter																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		During the quarter	Mean of the observations	During the quarter	Mean of the observations	During the quarter	Mean of the observations	During the quarter	Mean of the observations	During the quarter	Mean of the observations																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest			Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest

\* Mean of 81 observations.

† Mean of 12 weeks.

‡ Mean of 10 weeks.

\*\* Mean of 11 weeks.

† Mean of 7 weeks.

## DEATHS in LONDON from all Causes exclusive of Violent and Sudden Deaths.

Number of Weeks .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Spring Quarter .....	1846 1847 1848	969 912 973	820 1013 1006	931 954 981	832 952 948	785 962 992	820 967 1027	781 941 929	802 873 924	804 918 913	812 752 908	776 811 948	776 903 903	817 883 906
Mean Temperature .....	1846 1847 1848	46.8 36.8 51.1	45.5 47.9 44.4	50.4 42.6 49.1	45.5 45.5 44.0	48.4 48.1 54.5	55.2 49.1 62.7	51.8 56.1 60.8	54.2 58.4 59.9	57.6 63.4 56.5	64.6 62.3 57.1	66.4 54.4 60.8	69.5 56.0 60.4	61.2 57.8 57.4

\* A certain but unknown proportion should be deducted from the Russian deaths, which include the still-born.



# TABLE OF THE DEATHS

117 of the Districts of England (including the principal Towns): shewing the Number of Deaths Registered in the Quarters ending June 30th.

Deaths Registered in the Quarters ending June 30th.										Parts of Divisions and Districts	Popu-lation 1841	Deaths Registered in the Quarters ending June 30th.								
Popu-lation 1841	Years											Years								
	1840	1841	1842	1843	1844	1845	1846	1847	1848			1840	1841	1842	1843	1844	1845	1846	1847	1848
6612958	42074	39133	38569	40343	38977	40847	43734	51585	46552	Shrewsbury .....	21529	150	130	150	117	139	118	132	158	156
4664589	30951	28366	28014	28595	27380	29423	32311	39224	33607	Worcester .....	27130	158	155	140	172	129	150	139	196	174
Aggregate Deaths in the 11 Divisions of England.										Kidderminster .....	29408	154	121	118	155	169	279	131	196	174
										Dudley .....	86028	545	543	504	441	468	551	596	691	630
										Walsall .....	34274	175	177	211	191	174	180	220	252	289
										Wolverhampton ..	80722	464	506	661	414	457	541	500	847	625
										Wolverhampton ..	32669	204	195	238	219	201	228	243	344	293
										Birmingham .....	138187	892	774	775	735	871	858	842	1263	1135
										Aston .....	50928	267	272	264	276	298	292	269	320	299
										Coventry ..	31028	149	220	204	197	199	187	164	192	205
										<b>N. Midland Division</b>										
										Leicester .....	50932	371	322	327	277	232	432	305	329	379
										Lincoln .....	36110	233	194	190	205	180	202	205	211	222
										Nottingham .....	53080	387	294	277	299	325	322	310	404	328
										Basford .....	59634	379	343	302	325	358	351	339	384	360
										Derby .....	35015	202	239	208	210	209	206	209	223	270
										<b>N. Western Division</b>										
										Stockport .....	85672	657	527	489	511	418	516	621	622	595
										Marblefield .....	56018	425	382	388	386	336	362	438	509	476
										Gt. Boughton, } inc. Chester ... }	49085	372	278	325	291	236	291	312	322	312
										Liverpool .....	223054	2022	1751	1689	1914	1547	1611	2098	4809	1907
										West, Derby, } (adj. Liverpool) }	88652	460	488	525	558	524	584	828	987	815
										Blackburn .....	75091	593	469	399	562	460	525	638	642	664
										Preston .....	77189	839	448	475	507	463	481	587	627	503
										Rochdale .....	60577	538	386	385	494	407	466	475	464	491
										Bury .....	77496	604	573	444	492	495	436	531	626	529
										Bolton .....	97519	729	631	553	676	616	643	689	812	755
										Wigan .....	66032	503	401	349	477	486	358	654	668	436
										Prescot .....	43739	317	270	287	248	197	234	284	474	241
										Chorlton .....	93736	501	616	551	610	540	647	705	757	837
										Manchester .....	192408	1637	1357	1327	1447	1237	1324	1611	2362	1746
										Salford .....	70228	487	419	434	493	477	445	539	509	633
										Ashton & Oldham }	173964	1253	1116	1377	1074	992	1382	1460	1492	1476
										<b>York Division</b>										
										Sheffield .....	85076	554	528	485	534	464	513	852	636	808
										Huddersfield .....	107140	619	555	547	779	572	603	731	793	853
										Halifax .....	109175	641	558	549	679	606	627	807	727	765
										Bradford .....	132164	750	836	834	936	962	1106	1208	1109	1056
										Leeds & Hunslet }	168667	1138	1048	1165	1117	936	1177	1087	1492	1184
										Hull .....	41130	351	247	271	282	229	258	336	301	348
										York .....	47779	338	248	314	298	267	296	293	369	325
										<b>Northern Division</b>										
										Sunderland .....	56226	363	343	345	333	307	303	452	369	404
										Gateshead .....	38747	258	223	216	279	216	237	283	289	242
										Tynemouth .....	55625	324	339	336	308	256	293	423	398	322
										Newcastle-on- Tyne .....	71850	434	555	413	541	383	429	597	606	575
										Carlisle .....	36084	201	221	211	195	197	203	241	433	235
										Cockermouth .....	35676	177	157	156	190	166	174	218	288	198
										Kendal .....	34694	243	182	188	208	187	184	212	256	202
										<b>Welsh Division</b>										
										Abergavenny .....	50834	362	505	293	312	332	352	358	535	360
										Pontypool .....	25037	179	236	139	160	99	150	211	213	163
										Merthyr Tydfil ...	52864	353	410	308	264	560	461	438	585	433
										Newtown .....	25958	164	148	119	140	117	149	132	181	198
										Wrexham .....	39542	240	245	193	266	219	214	244	63	339
										Holywell ** .....	40787	208	233	186	205	208	280	220	267	236
										Anglesey .....	38105	189	154	196	128	110	191	205	233	201

last Quarter for the London returns ended July 1st, 1848.

Mortality of the Districts of Wandsworth, and Lewisham, and Sub-District of Hampstead, is included in the above Table, in each of the nine Years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

Former District of Ashton is now divided into the Districts of Ashton and Oldham, both included in the present Return.

Former District of Leeds is now divided into the Districts of Leeds and Hunslet, both included in the present Return.

Return for the sub-district of Whitford (Holywell) has not been received this quarter; the average of the four preceding June quarters has been substituted.



# A TABLE OF THE DEATHS IN LONDON FROM ALL CAUSES,

Registered in the June Quarters of the 8 Years, 1841-42-43-44-45-46-47-48.

CAUSES OF DEATH	Quarters ending June*								CAUSES OF DEATH	Quarters ending June*							
	YEARS									YEARS							
	1841	1842	1843	1844	1845	1846	1847	1848		1841	1842	1843	1844	1845	1846	1847	1848
ALL CAUSES .....	10595	10427	11621	11471	11267	11271	12361	12945	IV.—Cephalitis .....	180	142	176	153	144	147	173	
SPECIFIED CAUSES .....	10503	10333	11514	11425	11231	11235	12331	12877	Apoplexy .....	213	192	251	294	252	329	317	
I.—Zymotic Diseases.....	1696	1621	2434	2460	1894	1820	2148	3611	Paralysis .....	166	204	219	213	191	246	255	
SPORADIC DISEASES:—									Delirium Tremens .....	24	19	21	29	23	33	35	
II.—Dropsy, Cancer, and									Chorea .....	4	1	2	2	3	1	1	
other Diseases of un-									Epilepsy .....	46	41	52	55	49	90	101	
certain or variable									Tetanus .....	6	3	2	7	7	5	3	
Seat .....	717	745	714	722	674	492	548	560	Insanity .....	9	12	11	18	16	29	31	
III.—Tubercular Diseases ..	2640	2456	2509	2503	2444	2572	2440	2403	Convulsions .....	650	683	540	614	641	514	526	
IV.—Diseases of the Brain,									Disease of Brain, &c.	125	124	102	124	156	150	148	
Spinal Marrow,									V.—Pericarditis .....	7	10	21	29	29	20	34	
Nerves and Senses ..	1423	1421	1376	1509	1482	1544	1590	1446	Aneurism .....	8	3	8	14	11	11	15	
V.—Diseases of the Heart									Disease of Heart ..	227	261	294	335	379	374	466	
and Blood Vessels ..	242	274	323	378	419	405	515	365	VI.—Laryngitis.....	9	3	11	17	12	28	47	
VI.—Diseases of the Lungs									Bronchitis.....	38	117	190	194	272	510	710	
and of the other Or-									Pleurisy .....	21	26	30	19	28	40	67	
gans of Respiration ..	1215	1253	1475	1301	1591	1574	1923	1672	Pneumonia .....	744	752	840	715	869	705	748	
VII.—Diseases of the Sto-									Asthma .....	207	174	191	161	203	150	201	
mach, Liver, and other									Dis. of Lungs, &c.	196	181	213	195	207	141	150	
Organs of Digestion. }	816	658	745	729	731	788	830	728	VII.—Teething .....	194	203	199	165	163	114	120	
VIII.—Diseases of the Kid-									Quinsey .....	117	10	27	23	14	16	20	
neys, &c.....	61	74	91	94	125	133	151	149	Gastritis .....	212	182	169	11	19	20	30	
IX.—(Childbirth, Diseases									Enteritis .....	20	17	21	29	37	54	66	
of the Uterus, &c.....	117	102	116	99	150	158	177	112	Peritonitis.....	4	6	16	17	14	24	23	
X.—Rheumatism, Diseases									Ascites .....	16	20	20	9	32	40	23	
of the Bones, Joints,									Ulceration (of In-	21	18	31	23	25	28	45	
&c.....	56	69	104	82	85	134	161	92	testines, &c.) }	23	31	24	32	31	39	37	
XI.—Diseases of the Skin,									Hernia .....	4	1	9	7	11	18	22	
Cellular Tissue, &c. }	7	12	5	4	16	15	22	21	Ileus .....	9	3	4	3	6	11	7	
XII.—Malformations .....	12	7	19	22	17	47	40	58	Intussusception ..	43	41	60	74	65	82	85	
XIII.—Premature Birth and									Disease of Sto-	..	..	..	1	1	1	..	
Debility .....	254	312	224	236	242	255	286	292	mach, &c..... }	13	12	22	22	24	48	55	
XIV.—Atrophy .....	71	91	102	137	136	235	291	312	Disease of Pancreas	27	27	27	39	27	30	36	
XV.—Age .....	708	748	839	673	744	491	664	498	Hepatitis .....	112	84	116	105	117	154	155	
XVI.—Sudden .....	159	183	164	124	152	129	150	133	Jaundice .....	1	3	..	..	2	3	..	
XVII.—Violence, Privation,									Disease of Liver ..	5	4	6	9	4	11	7	
Cold & Intemperance }	309	307	274	352	329	443	395	425	Disease of Spleen..	..	..	..	..	..	..	..	
I.—Small Pox .....	256	59	105	425	246	87	181	381	VIII.—Nephritis .....	..	..	..	..	..	..	..	
Measles .....	148	338	374	208	322	163	277	306	Nephria (or	..	..	..	..	..	..	..	
Scarlatina .....	133	196	325	601	201	177	174	816	Bright's Dis.) see	..	..	..	..	..	..	..	
Whooping Cough .....	537	408	625	361	463	545	392	449	Dis of Kidneys. }	4	2	..	..	..	2	2	
Croup .....	103	126	89	126	83	67	50	80	Ischuria .....	3	4	4	3	7	9	7	
Thrush .....	53	43	47	42	45	40	35	49	Diabetes .....	5	5	3	5	10	7	13	
Diarrhoea .....	65	63	50	83	84	153	202	239	Stone .....	5	1	3	2	5	11	7	
Dysentery .....	13	11	17	18	17	18	39	41	Cystitis .....	3	8	13	16	12	8	11	
Cholera .....	1	7	8	9	2	9	4	17	Stricture of the	36	50	62	59	87	85	104	
Influenza .....	57	19	21	28	11	21	23	50	Urethra .....	..	..	..	..	..	..	..	
Purpura and Scurvy									Disease of Kid-	..	..	..	..	..	..	..	
Ague .....	5	5	1	3	4	9	25	12	neys, &c..... }	2	3	2	3	1	4	4	
Remittent Fever ..	3	4	5	4	7	27	16	29	IX.—Paramenia .....	4	..	5	6	8	15	20	
Infantile Fever † ..	4	5	2	6	4	22	10	7	Ovarian Dropsy ..	71	71	94	67	104	102	102	
Typhus .....	253	266	690	455	308	364	568	882	Childbirth, see	40	28	15	23	37	37	51	
Metria or Puerper-									al Fever, see	2	..	1	1	2	2	4	
al Fever, see	..	..	..	..	..	..	..	60	Arthritis .....	26	41	34	27	31	79	84	
Childbirth .....	..	..	..	..	..	..	..	12	Rheumatism .....	28	28	69	54	52	53	73	
Rheumatic Fever, }									Dis. of Joints, &c..	..	1	1	..	3	..	3	
see Rheumatism }	51	58	58	68	80	78	107	129	XI.—Carbuncle.....	2	2	..	2	2	6	7	
Erysipelas .....	8	10	11	19	13	30	33	31	Phlegmon .....	5	9	4	2	11	9	12	
Syphilis .....	..	..	..	..	1	2	1	11	Disease of Skin, &c.	13	4	4	13	15	20	13	
Noma or Canker }									Privat on .....	4	1	4	6	3	6	12	
see Mortification }	1	..	..	1	..	..	..	..	Want of Breast }	..	..	..	..	..	..	..	
Hydrophobia .....									Milk, see Priva-	..	..	..	..	..	..	..	
II.—Hæmorrhage .....	49	47	39	52	39	46	52	45	tion & Atrophy }	..	..	..	..	..	..	..	
Dropsy .....	437	458	444	400	383	172	216	190	Neglect .....	..	..	..	..	..	..	..	
Abscess .....	31	42	16	20	15	16	11	19	Cold see Privation	..	..	..	..	..	..	..	
Ulcer .....	5	5	2	7	4	12	24	8	Poison .....	292	302	266	333	311	417	370	
Fistula .....	2	3	6	1	5	5	5	7	Burns & Scalds	..	..	..	..	..	..	..	
Mortification .....	52	44	53	46	60	34	29	52	Hangng, &c. ..	..	..	..	..	..	..	..	
Cancer .....	125	132	138	177	153	191	197	224	Drowning .....	..	..	..	..	..	..	..	
Gout .....	16	14	16	19	15	16	14	15	Fractures and	..	..	..	..	..	..	..	
III.—Scrofula .....	36	25	36	43	41	77	73	100	Contusions .....	..	..	..	..	..	..	..	
Tabes Mesenterica	51	66	104	125	128	202	227	199	Wounds .....	..	..	..	..	..	..	..	
Phthisis or Con-									Other Violence	..	..	..	..	..	..	..	
sumption .....	2062	1913	1884	1838	1819	1850	1733	1699	Causes not specified	92	94	107	46	36	36	30	
Hydrocephalus .....	491	452	485	497	456	443	407	405									

\* The mortality of the district of Lewisham, and sub-district of Ilampstead, was included in the Metropolitan Returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the Quarters ending June they were respectively (1840) 171; (1841) 172; (1842) 127; (1843) 127; (1844) 126; (1845) 157; (1846) 152.

† Under the head of sudden deaths are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned the coroner in vague terms, such as "found dead," "natural causes," &c. &c.

‡ In the years previous to 1848, "Worms" and "Infantile Fever," were classed together. The former is now placed to diseases of digestive organs.

NOTE.—It will be observed that the classification of the Abstract is now slightly modified in conformity with the second edition of the nosology. The extension of the list chiefly due to the improvements in the character of the returns, which are now made, in 93 cases out of 100, by the medical attendants of the deceased and by the coroners.



## REGISTRARS' NOTES.

The following Instruction was addressed to the 447 Registrars in the Country:—

“If at any time the number of deaths registered during the Quarter has been above the average, state, in a note at the foot of the Return, whether any epidemic disease, such as Measles, Typhus, &c., has been prevailing in the District, or if there be any other known circumstance which will account for the increase.”

The Registrars alone must be held responsible for the opinions expressed in any of the subjoined Notes.

SUP. REG. DISTRICT	REG. DISTRICT	
MAIDSTONE .....	West .....	Deaths 59: being 2 above the average of the corresponding quarters of the last 6 years. Measles has been prevalent.
ISLE OF WIGHT.....	Newport.....	Deaths 87: being 18 above the average of the corresponding quarters of the last 5 years, though no epidemic prevailed to which the increase can be attributed.
PORTSEA ISLAND....	Landport and Southsea ....	Deaths 110: being 70 less than in last quarter. 2 cases were from small-pox without vaccination, and one after vaccination. The district is healthy.
ST. ALBANS.....	St. Albans .....	Deaths 81: shewing a great increase, the average of corresponding quarters being 54. The excess is found amongst children of whom 34 died under 5 years. Measles has been prevalent, and in many cases fatal.
WYCOMBE.....	Princes Risborough .....	Deaths 41: the quarter has been remarkably healthy, except that measles, and hooping-cough have very much prevailed amongst children, so much so that although there has only been about an average number of deaths, a fourth of the whole has been from these diseases. There were 8 from measles, and 2 from hooping-cough.
NORTHAMPTON .....	All Saints.....	Deaths 80: this return is above the average, 24 persons having died of measles, which has prevailed in the district; of these the majority were under 2 years.
BEDFORD .....	Bedford and Cardington....	Deaths 96: this number is unusually high, owing to the mortality among children. 47 deaths occurred under 3 years. Measles, with the pulmonary complications, which so frequently accompany or follow it, has been the most prevalent and fatal disease of children.
.....	Bedford and Kempston ....	Deaths 71: measles, and hooping cough, have prevailed throughout this district during the quarter. 8 deaths have been registered from the former cause, and 7 from the latter; 3 from typhus. There have also been 14 deaths from consumption.
.....	Turvey .....	Deaths 16: being above the average. Influenza has still been prevalent, and was fatal in 3 cases. 2 persons died from scarlatina.
COLCHESTER .....	First Ward .....	Deaths 63: scarlatina prevailed amongst children.
.....	Third Ward .....	Deaths 39: there have been several cases of scarlet fever.
DEVIZES.....	Devizes .....	Deaths 73: being above the average. Small pox has prevailed throughout the quarter, and 23 cases have been fatal.
ST. THOMAS .....	St. Thomas .....	Deaths 44: above the average of the same quarter of previous years, and 17 beyond that of last year. In the present return are included 4 cases of measles, and 2 of typhus.
.....	Kenton .....	Deaths 39: being above the average. Hooping cough, measles, pneumonia and convulsions proved fatal to 20 children.
.....	Topsham .....	Deaths 36: hooping cough has been prevalent during the quarter, and there have been a few cases of typhus, also an unusual number of consumption cases, owing to the bad effects of influenza.
.....	Alphington.....	Deaths 19: being above the average. Measles has been prevalent, and caused 2 deaths. Small pox prevails to some extent.
PLYMOUTH.....	St. Andrew .....	Deaths 189: being 58 above the average of the 10 preceding springs. The principal causes were small pox, (15 deaths), measles (4), typhus (10), hooping cough (21).
.....	Charles the Martyr.....	Deaths 100: being 39 more than in the corresponding quarter of 1847. Among the causes are hooping cough (7 deaths), fever (10), small pox (unvaccinated) 2.
BATH .....	The Abbey.....	Deaths 76: latterly there have been among the paupers some dysentery and bilious diarrhoea, but the actual amount of sickness at present in any class is very small. one case of fatal small pox, being the second during 3 years, has occurred; the child had not been vaccinated.
BRISTOL .....	Castle Precincts .....	Deaths 112: being about the average; 9 persons died of small pox not previously vaccinated. Some children who had been vaccinated caught the infection, but their cases were of a milder character, and did not terminate fatally.
.....	St. Paul.....	Deaths 86: not exceeding the average. Scarlatina, hooping cough, and small pox, have been prevalent; but, in this district have not proved extensively fatal.
CLIFTON.....	Ashley .....	Deaths 48: being 18 above the same quarter of 1847. Small pox has much prevailed; but few deaths have occurred from that cause. Otherwise the district is healthy.
STROUD .....	Stroud .....	Deaths 45: there have been a few cases of small pox, measles, and scarlet fever. In other respects the district is healthy.
.....	Bisley .....	Deaths 45: an increase over last quarter of 13. Scarlatina, measles, and hooping cough, have been prevalent and in many cases fatal, particularly the last disease.
HEREFORD & DORE ..	Hereford City .....	Deaths 86: typhus has prevailed in this district to a greater extent than in any previous quarter. It was introduced into the low lodging houses of the city by an Irish vagrant family at the commencement of the winter.
SHREWSBURY.....	St. Mary .....	Deaths 95: 25 less than in last quarter. The district is not free from fever, which however rarely terminates fatally. Influenza, which was the chief cause of the great increase in last quarter, has disappeared, only one case early in April having been registered.



SUP. REG. DISTRICT	REG. DISTRICT	
WORCESTER.....	Worcester, North .....	Deaths 72: 42 less than in the last quarter; small pox has been prevailing, and caused 4 deaths. The poor shew great aversion to vaccination.
KIDDERMINSTER .....	Wolverley .....	Deaths 22: scarlet fever very prevalent this quarter.
DUDLEY .....	Sedgeley .....	Deaths 184: rather above the average of the corresponding quarters in the last 4 years. The most prevailing causes are typhus (9), phthisis (19), pneumonia (24), and diarrhoea (17) principally in children very young.
	Dudley .....	Deaths 229: about the average number, 175 have been duly certified by medical attendants. The number of deaths is considerably less than in the previous quarters for some time back. Out of the above, 40 were from pneumonia, (principally in children), 27 from fever, and 3 from small pox, (without previous vaccination.)
WALSALL .....	Darlaston .....	Deaths 76: about the average. Inflammations of the chest and bowels were the causes chiefly assigned in the first part of the quarter. 3 deaths occurred from small pox, (without previous vaccination), 1 from putrid fever. A low fever of a typhoid nature now slightly prevails.
WOLVERHAMPTON and SEISDON.....	Wolverhampton, Eastern .....	Deaths 203: shewing an evident improvement of the public health as compared with the previous return. Several deaths occurred however from epidemic diseases as follows: scarlatina (9), typhus (14), measles (3).
WOLSTANTON and BURSLEM .....	Tunstall .....	Deaths 141: the mortality amongst children in this district is very great. Small pox is very prevalent; and 21 deaths have been registered, all without previous vaccination, and in some cases without proper medical attendance.
	Burslem .....	Deaths 125: 31 below the number in the corresponding quarter of last year; but 20 above the average of the last 5 corresponding quarters. The greatest number of deaths (20) is attributed to phthisis; 16 to other diseases of the lungs and chest. From diarrhoea there have been 2 deaths; dysentery, 1; fever, 2; scarlatina, 2; influenza, 1; nervous fever, 1. In 65 cases the cause of death was certified; in 36 not certified; in 19 there was no medical attendant.
BIRMINGHAM .....	St. George .....	Deaths 245: 28 from scarlatina, 7 from typhus, 2 from small pox, 2 from hooping cough, and 2 from measles. The district is at present healthy.
	St. Mary .....	Deaths 233: being less than in the preceding quarter by 95, and 59 above the average. The principal causes of death have been, fever 38, phthisis 37, diarrhoea 13, pneumonia and bronchitis 26.
	St. Martin .....	Deaths 104: the same number as was registered in the corresponding quarter of last year, and 53 less than in last quarter; 12 were from scarlatina, and 13 from phthisis.
	Lady Wood .....	Deaths 96: being a decrease of 45 on the last quarter. The mortality was greatest in the month of April; in the last 2 months it was not above the average. Scarlatina, phthisis, and pneumonia have been the most prevalent diseases.
LEICESTER .....	East Leicester .....	Deaths 237: shewing an increase of 17 on the same quarter of 1847. There were 14 fatal cases of measles, and 17 of diarrhoea; all of the latter being in children under 2 years.
NOTTINGHAM .....	St. Ann .....	Deaths 94: shewing a decrease of 87 as compared with the last quarter, and a decrease of 66 as compared with the corresponding quarter of 1847. This is to be accounted for by the healthiness of the season, and in some measure by the unusual quantity of houses unoccupied, owing to the depressed state of trade.
BASFORD .....	Arnold .....	Deaths 49: this return is rather above the average. The increase is amongst the aged and the young. At present the district is suffering very much from influenza.
	Greasley .....	Deaths 73: rather below the average. Small pox has been prevalent for the last 2 months and has proved fatal in 3 cases. With very few exceptions those attacked by the disease have been unprotected by vaccination. The most absurd and inveterate prejudices against vaccination exist amongst some of the lower classes, and also in a few instances where we might have expected to find more intelligence. A few deaths have occurred from scarlatina, although it has not spread to a great extent in the district.
DERBY .....	St. Alkmund .....	Deaths 115: 30 above the general average, which may be attributed to the prevalence of consumption and small pox. Of the latter disease 19 fatal cases have occurred.
STOCKPORT .....	Hyde .....	Deaths 135: being above the average. Measles and scarlatina prevalent among children; diseases of the lungs among adults.
	Heaton Norris .....	Deaths 95: those in the same quarter of 1846, were 122; of 1847, 119. The return would have been still more favourable but for the increased mortality of scarlet fever, which has been epidemic in its most virulent form for the last two quarters. The deaths from it last quarter were 14. From phthisis, also, the deaths are more numerous. May this not be attributed in some degree to the hardships of the working community? Of the 23 persons to whom the latter disease was fatal, 14 were females, most of them employed in cotton mills, or the wives or daughters of operatives. Two-thirds of the deaths in childbirth were amongst the wives of workmen in factories. The Town Council have ordered levelling, paving and other sanitary measures to be taken in different parts of the borough.
	Hazelgrove .....	Deaths 35: considerably above the average. Notwithstanding the prevalence of small pox, only one case has proved fatal, and this without vaccination. The other cases are of the ordinary kind, as scarlatina, bronchitis, phthisis. A case of "spasmodic disease of the heart, occasioned by excessive grief," is recorded.
MACCLESFIELD .....	East .....	Deaths 100: this is above the general average. Small pox, typhus, pertussis, measles, and scarlatina, are still prevalent; but the greatest amount of mortality, from any one cause, proceeds from phthisis. Not less than 13 certified and 12 not certified cases of phthisis have occurred during the last quarter.
	Bollington .....	Deaths 79: being above the average. Scarlatina continued to be prevalent during the quarter, and 18 cases proved fatal, all amongst children, from 1 to 10 years old. There are 56 cases certified, 15 not certified, and 8 had no medical attendant.
	Prestbury .....	Deaths 29: rather exceeding the average. Scarlet fever and scarlatina were prevalent during the former part of the quarter, but have now subsided. Small pox has also been prevalent, 2 deaths having occurred from it without previous vaccination.
GREAT BOUGHTON .....	Hawarden .....	Deaths 41: Mucous diarrhoea, catarrh, and coryza, have been very prevalent for the last 3 weeks, but probably not fatal in any case.



SUP. REG. DISTRICT.	REG. DISTRICT.	
<b>LIVERPOOL</b> .....	<i>Saint Thomas</i> .....	Deaths 214: being 148 less than in the preceding quarter. The return is also less than in any corresponding quarter since 1845. This district is at present in a very healthy state.
.....	<i>Mount Pleasant</i> .....	Deaths 462; including 237 at the workhouse. The deaths are 242 less than in the last quarter, and 545 less than in the corresponding quarter of last year. Scarlatina has been fatal in 18 cases amongst children. There were 54 fatal cases of fever, 38 of phthisis, 10 of marasmus, 27 of diarrhoea, and 4 of dysentery in the workhouse.
.....	<i>Islington</i> .....	Deaths 271: in corresponding quarter of 1847, 466. No epidemic prevailing; district healthy.
.....	<i>St. George</i> .....	Deaths 112: being under the average. There were 32 fatal cases of consumption, 16 of other diseases of the lungs and 21 of fever.
<b>WEST DERBY</b> .....	<i>West Derby</i> .....	Deaths 165: exhibiting a decrease of 71 as compared with the previous quarter. From small pox, there were 3; from scarlet fever, 14; from other fever, 20.
.....	<i>Toxteth Park</i> .....	Deaths 349: shewing a decrease of 117 compared with March quarter, 1848. From typhus there were 30; scarlatina, 16; diarrhoea, 8; dysentery, 4; small pox, (vaccinated), 8; (not vaccinated) 6.
<b>BLACKBURN</b> .....	<i>Blackburn</i> .....	Deaths 359: being above the average, influenza having been prevalent in the beginning of this quarter. A few fatal cases of typhus and measles have occurred.
.....	<i>Oswaldtwistle</i> .....	Deaths 61: being above the average. Hooping cough has been very prevalent.
.....	<i>Witton</i> .....	Deaths 39: being rather above the average. Measles has been very prevalent during the quarter, 3 cases having proved fatal. Hooping cough has been very prevalent in the district, and fatal in 3 instances.
<b>ROCHDALE</b> .....	<i>Wardleworth</i> .....	Deaths 121: being above the average. Scarlatina was fatal in 14 cases, typhus and other fever in 20.
<b>BOLTON</b> .....	<i>Eastern</i> .....	Deaths 150: the smallest number registered in any former quarter, since that of September 1845. It is 65 less than in the corresponding quarter of last year and 71 less than the average of the previous 12 months. The malignant fevers which have been so prevalent here have almost vanished, and the number of deaths continues to diminish. The town generally appears to be in a healthy state. A fall in the price of provisions has probably had a favourable effect.
.....	<i>Western</i> .....	Deaths 150: being 25 less than were registered in the corresponding quarter of 1847, but 10 above the average of the corresponding quarters of the last 6 years. Scarlatina has been very prevalent, but not of a very malignant character.
.....	<i>Sharples</i> .....	Deaths 28: not arising from any epidemic disease. This quarter has been rather unhealthy.
.....	<i>Halliwell</i> .....	Deaths 32: considerably above the average, principally owing to measles. 11 persons died of that disease, and 12 of consumption.
.....	<i>Tonge-with-Haulgh</i> .....	Deaths 36. The small increase above the average chiefly arises from the prevalence of small pox. 3 fatal cases (without previous vaccination), occurred in one house, within the short space of 4 days.
<b>WIGAN</b> .....	<i>Wigan</i> .....	Deaths 218: shewing a decrease of 87 on the corresponding quarter of last year, and of 102 on that of 1846. This result may be attributed in a great measure to the decrease in the influx of Irish vagrants who brought disease with them into the town.
<b>PRESCOT</b> .....	<i>St. Helens</i> .....	Deaths 109: 89 below the corresponding quarter of last year. The district has become very healthy.
<b>CHORLTON</b> .....	<i>Chorlton-upon-Medlock</i> .....	Deaths 190: about the average of the corresponding quarters of 1646—7. Scarlatina has prevailed as an epidemic, and been fatal in no less than 35 cases. It has spared no class; in truth, those families who have the advantage of residing in the more healthy part of the district have been the greatest sufferers.
.....	<i>Hulme</i> .....	Deaths 308. The mortality during the last quarter has been light, although scarlatina has been very prevalent and proved fatal in 39 cases.
<b>MANCHESTER</b> .....	<i>Ancoats</i> .....	Deaths 418. Making allowance for deaths in the workhouse, the result appears to be that the mortality has been about 20 per cent. less than in the corresponding quarter of last year, and nearly 5 per cent. more than in the same quarter in 1846. The mortality was highest in May, lowest in June. Scarlatina and measles have been more than usually fatal.
.....	<i>St. George</i> .....	Deaths 290: being 63 below the corresponding quarter of last year. Typhus, so prevalent during the last 15 months, has considerably abated. The poor people in the district are now more employed and better fed. This may account for the decline of fever, and consequent decrease of mortality.
.....	<i>Market Street</i> .....	Deaths 307: males, 163; females, 144. Leaving out the public establishments, the deaths were, in April, 51; May, 49; and in June, 42—total, 142. In the workhouse, New Bridge Street, 82 deaths were registered. In the corresponding quarter of last year, 199 deaths were recorded in that establishment. The almost universal want of employment amongst the labouring population and high price of food occasioned severe privation, and no doubt greatly induced the spread of disease, and augmented the number of workhouse inmates at that period. At the fever hospital, Long Millgate, only 27 deaths have taken place, and the fever cases are so few, that the hospital is at this time entirely closed. During the quarter just ended, 52 persons died in the Royal Infirmary, on 24 of whom inquests were holden. Upon the whole, the district may be pronounced healthy in an unusual degree, the number of deaths being fewer than in any preceding quarter for a lengthened period.
.....	<i>London Road</i> .....	Deaths 246: being less by 43 than in the corresponding period of 1847, and by 34 than in that of 1846. It is, however, above the average of the June quarters of 1845, 1844, and 1843, by 38.
.....	<i>Cheetham</i> .....	Deaths 49: being 6 less than during the previous quarter. The prevailing epidemic is measles; many of the cases of which have been followed by pneumonia. Seven persons died of this disease, 8 from phthisis, and 4 from scarlet fever.
.....	<i>Newton</i> .....	Deaths 91: shewing an increase, in consequence of scarlet fever being epidemic.
<b>SALFORD</b> .....	<i>Regent Road</i> .....	Deaths 190: being 30 above the general average. There were 25 from phthisis, and 24 from measles.



SUP. REG. DISTRICT	REG. DISTRICT	
<b>SALFORD</b> .....	<b>Greengate</b> .....	Deaths 295: about 20 per cent. above the average. In April, 111; May, 92; June, 85. Pertussis, scarlatina, and measles, have been prevalent.
.....	<b>Pendleton</b> .....	Deaths 121: scarlatina and measles have been very prevalent during the past quarter.
<b>ASHTON and OLDHAM</b> .....	<b>Audenshaw and Droylesden</b> .....	Deaths 73: 5 more than in the same quarter of 1847. Small pox has been very prevalent, but not fatal during the quarter.
.....	<b>Knott Lanes</b> .....	Deaths 46: being 9 above the average of the corresponding quarters of 1846 and 1847. Scarlatina and pneumonia have been most prevalent. Many of the entries are uncertified as to the cause of death, because several of the medical attendants are unqualified practitioners.
.....	<b>Dukinfield</b> .....	Deaths 189. There are 68 less than in the corresponding quarter of 1847.
.....	<b>Mottram</b> .....	Deaths 62: being above the average. Scarlet fever has been prevalent, and in many cases fatal.
.....	<b>Oldham above Town</b> .....	Deaths 202. There were 20 cases of typhus (5 of which were in the fever ward), and 19 of scarlet fever.
.....	<b>Royton</b> .....	Deaths 57: being above the average. Affections of the respiratory organs, influenza, measles, and scarlatina, have been the prevailing disorders.
.....	<b>Chadderton</b> .....	Deaths 90: being above the average. 22 were caused by scarlet fever.
<b>SHEFFIELD</b> .....	<b>Park</b> .....	Deaths 140. The corresponding quarter of last year was 80. There were 17 cases of small pox (without previous vaccination), and 13 of measles. The registrar has observed that the mortality is always greatest (especially among children) when trade is much depressed, as has been the case during the last two quarters.
.....	<b>Brightside</b> .....	Deaths 62: a little above the average. The deaths of children at 5 years and under amount to 37. There were 3 from small pox.
.....	<b>North</b> .....	Deaths 316: from measles, which yet prevails, 39; from scarlet fever, 8; from other fever, 19; from small pox, 10. The deaths from this last disease, which appears to be on the decrease, have taken place in families opposed to vaccination.
<b>HUDDERSFIELD</b> ....	<b>Huddersfield</b> .....	Deaths 239: which is more than the average, though no epidemic prevails. Infants prematurely born, and others who died under 6 weeks (amounting to 21), have raised the mortality.
.....	<b>Almonbury</b> .....	Deaths 75: almost the same number as were registered in the corresponding quarter of last year; but although this is above the average, no epidemic prevails. On Sunday, the 2nd of April, this district was visited by lightning, when three young persons, respectively 10, 12, and 17 years, were struck dead at the same instant, and in the same place.
.....	<b>Kirkheaton</b> .....	Deaths 87: which is above the average, and 20 more than in last quarter. There were 10 fatal cases of measles, all in the lower part of Mold Green, where population is the most dense and houses the most crowded. A case of typhus was registered.
.....	<b>Newmill</b> .....	Deaths 43: exceeding those of last quarter by 6, and 4 more than the number registered in the corresponding quarter of last year. Scarlatina has been prevalent in the district.
.....	<b>Holmfirth</b> .....	Deaths 81: exceeding the average. The prevailing diseases have been pneumonia, bronchitis, consumption, and croup.
.....	<b>Honley</b> .....	Deaths 54: rather more than the average, and more than one-half occurred amongst children under 4 years. Measles was the chief cause of the increased mortality.
.....	<b>Meltham</b> .....	Deaths 46: about 50 per cent. above the average. Croup has been prevalent, and fatal in many cases: so has typhus, though in a less degree. Deaths have also occurred amongst young children and aged people in a greater proportion than usual; and 8 persons have died of phthisis during the quarter.
.....	<b>Lockwood</b> .....	Deaths 45: rather above the average; partly attributable to the prevalence of measles, of which 7 cases terminated fatally.
.....	<b>Golear</b> .....	Deaths 72: being above the average, and exceeding those of the corresponding quarter of last year by 20. The increase may be attributed to the mortality amongst children, 28 having died at 2 years of age and under. No epidemic prevails.
<b>HALIFAX</b> .....	<b>Halifax</b> .....	Deaths 231: 58 above the average for the quarter, and exactly the same as in the June quarter of last year. The following epidemic diseases have prevailed during the quarter. Small pox, 7 deaths; diarrhoea, 6; fever, 6; influenza, 2; measles, 6; croup, 2.
.....	<b>Southowram</b> .....	Deaths 48: being above the average. The increase is among young and old persons, and does not arise from epidemic disease.
.....	<b>Sowerby</b> .....	Deaths 85: being above the average. Measles prevails in this district; but there have been only 2 deaths registered from that complaint (neither having had any medical attendant).
.....	<b>Northowram</b> .....	Deaths 132: which is above the average, but from no particular cause. Rather more than the usual number have died from consumption and old age.
.....	<b>Ovenden</b> .....	Deaths 76: being 15 more than in last quarter. Typhus has been prevalent; 5 deaths having been certified to have occurred from that malady.
<b>BRADFORD</b> .....	<b>East</b> .....	Deaths 198: 51 more than in the quarter ending March, 1848, and 36 less than in the corresponding quarter of 1847. Diarrhoea carried off 11 persons; typhus, 4; measles, 4; small pox, 5.
.....	<b>Thornton</b> .....	Deaths 69: rather, but not much, above the average. Small pox is very prevalent in one part of the district, though so far it has only terminated fatally in 2 instances, both of which were without previous vaccination.
.....	<b>Drighlington</b> .....	Deaths 34: being above the average. Small pox is prevalent. Two deaths, without previous vaccination, have occurred from that cause.
.....	<b>Pudsey</b> .....	Deaths 95: considerably above the average, owing chiefly to the prevalence of scarlatina, of which there have been 17 fatal cases, or nearly one-fifth of the total number of deaths.



SUP. REG. DISTRICT	REG. DISTRICT	
LEEDS .....	North .....	Deaths 240: being considerably more than one-third less than in the corresponding quarter of last year. The district is at present in a very healthy state. Few cases of small pox have proved fatal, and those are chiefly with children that have not been vaccinated.
.....	West .....	Deaths 250: 25 less than in the last quarter. 22 cases of small pox have been registered in this quarter; in 6 of which only had vaccination been performed.
HUNSLET .....	Kirkstall .....	Deaths 126: this is above the average, owing to the prevalence of fever. 10 deaths occurred from scarlatina, and 4 from typhus. The increased mortality was in Bramley township, where the deaths were 72 this year, only 48 in the same quarter of 1847, and only 47 in that of 1846.
KINGSTON-UPON- HULL .....	Myton .....	Deaths 199: which is 20 more than in the corresponding quarter of last year, but only one more than in that of 1846. The deaths of 53 children under 1 year of age have been registered this quarter, exceeding the number in the corresponding quarter of 1847 by 22.
SUNDERLAND .....	East .....	Deaths 82: 18 more than in the corresponding quarter of last year. 6 persons died of small pox, 4 of fever, and 12 of pneumonia.
TYNEMOUTH .....	Tynemouth .....	Deaths 79. The mortality has been very light in this district during the quarter ending June 30. The register shews 32½ less than the average of the 4 preceding quarters, and 41 less than the number registered in the corresponding quarter of 1847.
.....	North Shields .....	Deaths 104: which is still above the average. 11 were from typhus, and 8 from small pox (without previous vaccination.)
.....	Wallsend .....	Deaths 30. This number is above the average. Typhus and bronchitis have been the prevailing diseases, and in several instances have been fatal.
NEWCASTLE-UPON- TYNE .....	All Saints .....	Deaths 139. Typhus has nearly left this district: 8 deaths only were registered from that disease this quarter. There is no epidemic disease prevalent, so that the above number is not quite the average; not half the number, as compared with the quarter ending March, 1848, and very little more than a third of the number for that ending December, 1847.
CARLISLE .....	St. Cuthbert .....	Deaths 66: considerably below the average, being 88 less than in the corresponding quarter of last year. The district is very healthy.
.....	Dalston .....	Deaths 19; 6 less than in the corresponding quarter of last year, although small pox has been very prevalent. Only 2 cases, however, proved fatal.
COCKERMOUTH .....	Maryport .....	Deaths 78: being above the average. Small pox is prevalent in part of the district. 19 cases have proved fatal.
KENDAL .....	Kendal .....	Deaths 96: more by 8 than the births; but no disease prevailed more than usual to account for the increase. The deaths of 1 year and under are 19; and the united ages of 8 individuals amount to 673, being rather more than 84 years to each.
.....	Milnthorpe .....	Deaths 37. Five persons died whose united ages amount to 421 years, and give an average to each of 84 years.
.....	Kirkby Lonsdale .....	Deaths 28: 5 less than in last quarter. Measles and typhus have been prevalent, and proved fatal, the former in 3 cases, the latter in one.
MERTHYR TYDFIL .....	Merthyr Tydfil, Lower .....	Deaths 145. No epidemic has been very fatal. 12 deaths were from measles; 2 from small pox; 10 from fever; and 5 from diarrhoea. 35 of the deceased had no medical attendant.
NEWTOWN & LLAN- IDLOES .....	Newtown .....	Deaths 64: which is above the average. Small pox has been, and now is, very prevalent; and 17 deaths were the result of this disease.
.....	Tregynon .....	Deaths 46: which is above the average. Malignant scarlet fever has been prevalent in this district.
WREXHAM .....	Malpas .....	Deaths 46: 19 more than in the corresponding quarter of last year, but from no particular epidemic.
.....	Wrexham .....	Deaths 122: being 4 above those of the preceding quarter. 15 persons died of small pox, 9 of scarlatina, and 13 of phthisis. Small pox has been prevailing greatly for some time in the town and a portion of the district. Most of the fatal cases from small pox were without vaccination, which has been much neglected here.
HOLYWELL .....	Flint .....	Deaths 48. The mortality in this district is under the average. The deaths were 23 less than in the corresponding quarter of 1847.



# QUARTERLY METEOROLOGICAL TABLE,

Compiled from the Weekly Tables furnished to the Registrar General by the Astronomer Royal.

Deaths registered in London from Small Pox, Measles, Scarlatina, Hooping Cough, Typhus, Diarrhoea, Dysentery and Cholera, Influenza, Consumption, and other diseases of the Lungs; the numbers at each age,\* and the total deaths † (except violent and sudden) in each of the 13 weeks ending July 1st, 1843.

1846	Place of the Moon	THERMOMETERS										Mean height of the Barometer, from 12 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS														Mean amount of Cloud, 0-10	Rain in Inches (7 days)	Small Pox				Measles	Scarlatina	Hooping Cough	Typhus	Diarrhoea, Dysentery, and Cholera	Influenza	Phtisis or Consumption	Other diseases of the Lungs	Deaths at Three Ages, (exclusive of violent and sudden Deaths)			Deaths from all causes, (exclusive of violent and sudden deaths)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		Mean			Dew Point		Self-registering		In the Water of the Thames at Greenwich by the Self Registering Thermometer read at 9 o'clock.		Difference between the dew point temperature and the mean temperature of the week and the mean on an average of 25 years.			General direction		The amount of Horizontal movement of the air in each week		Mean amount of Cloud, 0-10	Rain in Inches (7 days)	Small Pox	Measles	Scarlatina	Hooping Cough	Typhus	Diarrhoea, Dysentery, and Cholera	Influenza	Phtisis or Consumption			Other diseases of the Lungs	0 to 15	15 to 60	60 and upwards																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Highest during the week	Lowest during the week	Mean of 12 observations	Mean of 12 observations	Highest in the week	Lowest on the grass	Mean of 7 observations	Mean of 7 observations	Of the highest on each day from 7 observations	Of the lowest on each day from 7 observations	Mean of 12 differences	Mean of the least on each day, 6 observations	Mean of the greatest on each day, 6 observations	General direction	Greatest pressure in the week	Mean for the week	Pressure in lbs. on the square foot	Wind as deduced from Observer's Anemometer											0 to 15	15 to 60					60 and upwards																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
April	6th	New, Apr. 3d	74.6	34.7	61.4	41.4	20.0	51.1	42.4	96.7	74.5	31.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0</

\* Mean of 12 weeks.

† Mean of 10 weeks.

‡ Mean of 11 weeks.

\*\* In the last 3 weeks the average is taken from only 7 years.

† The ages of 41 were not specified in the Returns.  
† Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases of violence, and of sudden deaths, but are not included in the comparison of weeks.  
† Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases of violence, and of sudden deaths, but are not included in the comparison of weeks.



## REMARKS ON THE WEATHER DURING THE QUARTER ENDING JUNE 30, 1848.

*By James Glaisher, Esq., of the Royal Observatory, Greenwich.*

The weather during the first month of this Quarter was a continuance of the wet weather of the two preceding months; that during May was extremely fine; and that in the month of June was changeable, wet and dull. Till April 5 the daily temperatures of the Air exceeded the averages of the same days of seven previous years by  $11^{\circ}9$ ,  $12^{\circ}8$ ,  $15^{\circ}6$ ,  $16^{\circ}1$  and  $7^{\circ}2$ ; on the 6th it was below the average and for the most part continued below till May 2, at times to a great extent; from this time till the 30th of May the daily temperatures exceeded their averages by quantities varying from  $2^{\circ}$  to  $15^{\circ}$ . From May 30 to the end of the Quarter the daily temperatures were below their average values, with the exception of eight days only.

In pursuance of the arrangement which I have hitherto followed, I will speak of each subject of investigation separately.

*The Mean Temperature of the Air at Greenwich*

For the month of April was  $47^{\circ}6$ , which is  $0^{\circ}6$ ,  $2^{\circ}4$ ,  $0^{\circ}5$  above those of the years 1841, 1842, and 1843, respectively,  $4^{\circ}1$  below that in 1844;  $1^{\circ}3$ ,  $0^{\circ}5$ , and  $2^{\circ}3$  above those of the years 1845, 1846, and 1847; or it is  $0^{\circ}5$  above the average of these seven years;

For the month of May was  $59^{\circ}7$ , which is  $2^{\circ}9$ ,  $6^{\circ}5$ ,  $7^{\circ}5$ ,  $6^{\circ}8$ ,  $10^{\circ}3$ ,  $5^{\circ}1$ , and  $3^{\circ}3$  above those in the years 1841 to 1847 respectively, or it is  $6^{\circ}1$  above the average of these seven years;

For the month of June was  $58^{\circ}5$ , which is  $2^{\circ}1$ ,  $2^{\circ}2$ , and  $0^{\circ}5$  above those of the years 1841, 1843, and 1847, respectively;  $4^{\circ}4$ ,  $2^{\circ}2$ ,  $2^{\circ}2$ , and  $6^{\circ}8$  below those of the years 1842, 1844, 1845, and 1846, respectively, or it is  $1^{\circ}6$  below the average of these seven years.

The mean value for the Quarter was  $55^{\circ}3$ ; that for 1841 was  $53^{\circ}4$ ; for 1842 was  $55^{\circ}8$ ; for 1843 was  $51^{\circ}9$ ; for 1844 was  $55^{\circ}1$ ; for 1845 was  $52^{\circ}1$ ; for 1846 was  $55^{\circ}7$ , and for 1847 was  $53^{\circ}2$ ; so that the excess for this Quarter above the corresponding Quarter in the years 1841, 1842, 1843, 1844, 1845, and 1847, was  $1^{\circ}9$ ,  $1^{\circ}5$ ,  $3^{\circ}4$ ,  $0^{\circ}2$ ,  $3^{\circ}2$ , and  $2^{\circ}1$ ; the only year between 1841 and 1847 whose mean temperature for this period exceeded that for the present year was 1846; the difference, however, is small, being  $0^{\circ}4$  only. The average value for this Quarter from the seven preceding years was  $53^{\circ}6$ ; so that the mean temperature of the air for the Quarter ending June 30, 1848, exceeds that of the corresponding Quarter in the preceding seven years by  $1^{\circ}7$ . In the Quarter ending 1848, March 31, this value was found to be  $1^{\circ}7$  in excess, and in that ending 1847, Dec. 31, it was found to be  $3^{\circ}4$  in excess, so that the mean temperature of the air in the nine months ending 1848, June 30, exceeds the average value for the same period of time in the preceding seven years by  $2^{\circ}3$ .

*The Mean Temperature of Evaporation at Greenwich*

For the month of April was  $44^{\circ}5$ , which is  $0^{\circ}4$  above that for the preceding seven years;

For the month of May was  $53^{\circ}0$ , which is  $2^{\circ}6$  above that for the preceding seven years;

For the month of June was  $54^{\circ}4$ , which is  $1^{\circ}2$  below that for the preceding seven years.

The mean value for the Quarter was  $50^{\circ}6$ , which is  $0^{\circ}6$  above the average for the seven preceding years.

*The Mean Temperature of the Dew Point at Greenwich*

For the month of April was  $41^{\circ}4$ , which is  $0^{\circ}7$ ,  $3^{\circ}1$ ,  $0^{\circ}8$ , and  $4^{\circ}2$  above those for the years 1841, 1842, 1845, and 1847 respectively,  $1^{\circ}2$ ,  $2^{\circ}8$ , and  $0^{\circ}9$  below those of the years 1843, 1844, and 1846, or it is  $0^{\circ}6$  above the average of these seven years;

For the month of May was  $48^{\circ}6$ , which is  $1^{\circ}9$ ,  $2^{\circ}7$ ,  $4^{\circ}0$ , and  $0^{\circ}6$  above those for the years 1842, 1844, 1845, and 1846 respectively,  $2^{\circ}2$  and  $0^{\circ}2$  below those of the years 1841 and 1843, and is the same as that for 1847, or it is  $0^{\circ}9$  above the average for these seven years;



For the month of June was  $51^{\circ}6$ , which is  $2^{\circ}4$ ,  $0^{\circ}4$ ,  $1^{\circ}8$  *above* those for the years 1841, 1843, and 1847, respectively;  $2^{\circ}7$ ,  $3^{\circ}6$ , and  $4^{\circ}4$  *below* those of the years 1842, 1845, and 1846 respectively, and is the same as that for 1844, or it is  $0^{\circ}8$  *below* the average for these seven years.

The mean value for the Quarter was  $47^{\circ}2$ , which is  $0^{\circ}2$  *above* the average for the corresponding period of the preceding seven years.

*The mean weight of water in a cubic foot of Air* for the Quarter was 3.8 grains, which is 0.1 grain *less* than the average for the seven preceding years.

*The additional weight of water required* to saturate a cubic foot of air was 1.4 grains. The average for the seven preceding years was 1.2 grains. The value required in May was 2 grains, and the mean value for May from the preceding seven years is 0.9 grain only.

*The mean degree of humidity* of the atmosphere for April was 0.794, for May was 0.664, and for June was 0.768; these values being *less* than their averages for the seven preceding years by 0.012, 0.154, and 0.012 respectively. The value for the Quarter was 0.742, which is 0.059 *less* than the average for these years.

*The mean elastic force of vapour* for the Quarter was 0.343 inch, which is of the same value as the average of the seven preceding years.

*The mean reading of the Barometer* at Greenwich for April was 29.589 inches, for May was 29.926 inches, and for June was 29.642 inches; these values are 0.164 inch *below*, 0.158 inch *above*, and 0.167 inch *below* respectively, the averages for the seven preceding years. The mean value for the Quarter was 29.719 inches, which is 0.058 inch *below* the average for these years. The mean reading in February was 29.517 inches, in March was 29.505 inches, and in April, as above, 29.589 inches. There is no similar instance in this century of the mean reading of the barometer for any three consecutive months being so small as this; the nearest approach to it was in the months of November and December, 1803, and January, 1804.

*The average weight of a cubic foot of Air* under the average temperature, humidity, and pressure, was 531 grains; the average for the seven preceding years was 533 grains.

The rain fallen at Greenwich in April was 3.4 inches; in May was 0.4 inch; and in June was 3.5 inches; the average values for the seven preceding years were 1.3 inches, 1.6 inches, and 1.5 inches respectively. The amount fallen in the Quarter was 7.3 inches, which is 2.9 inches *above* the average of corresponding quarters of seven previous years. The total amount fallen in this year till June 30 was 15.2 inches, which is nearly six inches *above* the average fall in this period as deduced from the above mentioned years. So large a fall of rain as 7.3 inches has not occurred at the Observatory within the corresponding Quarter since the year 1824, and so large a fall as 15 inches within the first six months of the year has not taken place within the previous 33 years, probably not within this century.

*The temperature of the water of the Thames* was  $60^{\circ}7$  by day, and  $59^{\circ}6$  by night. The water, on an average, was  $3^{\circ}6$  warmer than the air.

*The horizontal movement of the Air* was about 114 miles daily, being about its average value.

*The highest and lowest readings of the Thermometer* in Air at the height of four feet above the ground, and protected as much as possible from the effects of radiation and rain, were  $80^{\circ}0$  and  $32^{\circ}0$ .

*The average daily range of the Readings of the Thermometer* in Air at the height of four feet, was  $16^{\circ}7$ ,  $30^{\circ}5$ , and  $17^{\circ}7$  in the months of April, May, and June respectively. The average ranges for these months from the observations of the seven preceding years were  $16^{\circ}7$ ,  $17^{\circ}6$ , and  $19^{\circ}4$ . The range in the month of May exceeded the average value for that month by  $12^{\circ}9$ , and it was larger than the mean daily range in any month in the preceding seven years. The next largest mean daily range was  $22^{\circ}5$ , which took place in the month of June, 1846. The average for the Quarter was  $21^{\circ}6$ , being  $3^{\circ}4$  in excess over the average for the seven years ending 1847.

In April the *Readings of the Thermometer on grass* were at or below  $32^{\circ}$  on twelve nights, and the lowest reading was  $25^{\circ}$ . In May they were at or below  $32^{\circ}$  on fourteen nights, and on eleven other nights the readings were below  $40^{\circ}$ . In June the lowest reading was  $31^{\circ}5$ : on six nights the readings were between  $32^{\circ}$  and



40°. The amount of heat radiated at night from the earth in the month of May was very great indeed. The observer at Leeds says, that white frosts were almost of nightly occurrence during this month. The observer at Beckington speaks of the severe frost of the 30th of June, which was general over the south of England.

The mean amount of cloud for April was 7.3, for May was 3.0, and for June was 7.4. The month of May presented this remarkable peculiarity—that the sky was absolutely cloudless, both day and night during the first eight days, and almost free from cloud till the 15th day, the atmosphere being free from haze during this time. These circumstances are without a parallel on record. The sky during the months of April and June was more clouded than usual, so that the mean amount for the Quarter, viz. 5.9, is only 0.2 less than the average for the corresponding Quarter of the seven previous years.

There were three exhibitions of the *Aurora Borealis* during the Quarter, which occurred on April 3, 7, and 29.

The electricity in the atmosphere during the month of April was generally in an active state, and rather more than the average amount; it was frequently negative, which circumstance always preceded or occurred during the fall of rain. In the month of May the amount of electricity was small, and particularly during the first half of the month, excepting on the 3rd, 4th, and 5th, on which days very active positive electricity was shewn. Till the last week in June the electricity was frequently active, being mostly positive, and at times negative. Generally the electricity was positive at all times when rain was not falling, and at times after rain had been falling for some time.

Thunder Storms at different parts of the country occurred on April 1, 2, 7, 17, 19; May 10, 14, 15, 18, 20, and 26; June 12 and 22. The heaviest of these storms occurred on June 12, and extended over all the southern parts of the country including latitude 52°; north of this parallel very heavy rain fell. At many places on this day more than an inch of rain fell in a few hours. Generally, however, the storms during this Quarter, and more particularly in the month of April, were local, in many cases not extending beyond a radius of a mile. The observer at Cardington says, on April 2nd, at 4<sup>h</sup> P.M., an exceedingly heavy storm of hail and rain fell; within twenty minutes water to the depth of 0.64 inch was collected. By enquiries it appeared that this storm was confined within a circumference of three miles. The observer at Whitehaven says that, on May 14, a violent thunder storm occurred, accompanied by a heavy fall of triangular pieces of ice; near Grassmere, garden plants, shrubs, and vegetables were completely riddled, and 80 panes of glass were broken in a conservatory by the ice shower. Though the ground was previously quite warm, the hail or rather ice, remained on the ground for several hours, and in some places till the following morning. This storm continued for about 40 minutes, and was confined to a radius of less than 2 miles. Many other storms of a similar character took place in different parts of the country.

Snow fell at Saffron Walden on April 9, at Stone on April 10, and at Leeds on April 11. The flakes at Stone measured 3 inches by 2 inches.

The approximate mean monthly values of the several subjects of investigation are shown in the subjoined tables; but, as they have not been corrected for diurnal variations corresponding to the particular time or times at which the observations have been made, the values generally are not in a state for comparison with each other. This remark does not apply to the approximate mean monthly temperatures, because the same correction is applicable at all places.

The mean monthly temperatures of the places in Cornwall and Devonshire have not been very different from those at other places during this Quarter; usually in the summer months they are below those of other places.

The Reading of the Barometer during the month of April was fluctuating, and exhibited a continuance of those oscillations and low readings mentioned in last report in February and March. On April 1st, at 9<sup>h</sup> A.M. the reading was 29.969 inches; slight variations only took place till the 5th, on this day the reading decreased 0.3 inch; and on the 6th, at 6<sup>h</sup> P.M., was 29.516 inches and still decreasing; on the 8th, at 6<sup>h</sup> P.M., it was 29.198 inches, it then turned to increase and was 29.330 inches at midnight; on the 9th, at noon, it was 29.430 inches, when it again turned to decrease, and was 29.183 inches on the 10th at midnight; shortly after this the reading increased and was 29.639 inches on the 11th at 3<sup>h</sup> P.M.; it again decreased and was 29.301



inches on the 12th at 6<sup>h</sup> A.M.; it then turned to increase at first slowly, and then quickly, the reading on the 12th at midnight was 29.928 inches; it then turned to decrease and was 29.179 inches on the 18th at midnight; it continued at about this value on the 19th and 20th; it then began to increase slowly and reached 29.8 inches on the 26th at midnight; it then alternately decreased and increased by small quantities till the last day, when for the first time in the month it reached the point 30 inches.

From May 1 to 14 its readings were above 30 inches, the highest being 30.217 inches on the 11th at 6<sup>h</sup> A.M.; this value decreased to 29.155 inches on the 17th at 6<sup>h</sup> P.M.; it increased to 30 inches on the 20th, and to 30.169 inches on the 24th; it passed below 30 inches on the 26th, and to the end of the month the changes were small.

During June the reading was generally low; its extreme readings were 29.143 inches on the 3rd, and 30.015 inches on the 20th.

The heavy rains in April, following the wet weather of February and March, caused the land to be in a soddened state, and rivers generally to be much swollen. The thunder storms in many places did much damage. The months of February, March, and April were so wet that the spring corn was sown with much difficulty. The month of May was distinguished by high temperatures, cloudless skies both day and night for a long period, very small falls of rain, with only the average amount of water mixed with the air notwithstanding the high temperatures, so that the degree of humidity was small. The earth became sun-baked and so hard as to be almost unbreakable; vegetation was greatly checked. During the month of June the earth again became saturated; the crops improved, and at the end of the Quarter there was every prospect of a full average produce.

The observer at Leeds says—"that in April the diseases in the lungs affecting cattle and sheep was extremely frequent and generally fatal. In May, notwithstanding the great heat during the days, the almost nightly occurrence of white frosts checked the growing vegetation greatly; the disease among cattle and sheep was in a great measure stopped. In June, with the return of wet and cold weather, the disease among cattle again appeared; so fatal a season to milch cows has not occurred within my remembrance in this neighbourhood. The potato crop is free from disease, and it is so abundant that I have never known this vegetable so cheap before at this season."

The observer at Beckington says—"I have heard a good deal of the potatoe disease in this parish, but my own are in as healthy a state as they have ever been. The severe frost on Friday night, the 30th of June, struck the potato haulm, and did much damage to the peas."



## MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING JUNE 30, 1848.

Compiled from Observations furnished by the Gentlemen whose names are mentioned in the first column, the Hygrometrical results having been deduced from Glaisher's Hygrometrical Tables.

Year	Months	Latitude	Longitude	THERMOMETERS										WIND	RAIN		Deductions relative to the Humidity of the Atmosphere					REMARKS					
				Mean Pressure of Dry Air		Dry Bulb	Wet Bulb	Temperature of the Dew Point		Self-registering					Average strength 0—6	General Direction	Amount of Clouds 0—10	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean degree of Humidity		Mean quantity of Water in a vertical column of Atmosphere	Weight of Air in a cubic foot	Height of the station above the Sea in feet	Daily Observations taken at	
1848		° / ' / ''	° / ' / ''	Mean of daily Observations	Mean of daily Observations	Observed	Deducted	Highest during the month	Lowest during the month	Mean of the high-est on each day	Mean of the low-est on each day	Approximate mean temp. of the month	Average daily range of the thermometer readings	Range of the Thermo-meter in the month													
HELSTON, M. P. Moyle, Esq.	April	50° 7'	5° 18' W.	50.2	47.4	°	44.3	72.0	30.0	54.8	12.3	48.5	12.5	42.0	1.6	N.	5.1	13	4.3	0.8	0.816	4.2	534	106	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.	
	May	50° 6'	5° 18' W.	60.6	55.3	°	51.0	78.0	36.0	67.5	17.9	57.7	19.6	42.0	1.3	E.	2.2	6	0.7	1.3	0.725	5.3	528	...	3 P.M.		
	June	50° 6'	5° 18' W.	59.6	55.6	°	52.4	74.0	41.0	64.8	19.5	57.1	15.3	33.0	1.7	...	5.8	16	3.3	1.2	0.785	5.6	524	...	9 P.M.		
FALMOUTH, Lovell Squire, Esq.	April	50° 9'	5° 4' W.	50.9	...	°	...	66.0	30.0	56.4	41.9	49.2	14.5	36.0	1.6	N.	6.2	18	4.3	...	...	...	...	...	9 A.M.	At Tonquay the mean temperature of the dew point for May was return-ed to 58.9, it is altered conjecturally to 48.9; the mean of the minimum thermometer readings in May was returned 39.2, it is altered conjecturally to 49.2. The readings of the dry and wet bulb thermometers from which the dew point has been deduced, should have been returned.	
	May	50° 4'	5° 4' W.	60.4	...	°	...	76.0	38.0	67.5	15.3	56.4	22.2	38.0	1.3	E.	3.1	5	0.9	...	...	...	...	...	3 P.M.		
	June	50° 2'	5° 4' W.	59.2	...	°	...	77.0	39.0	65.9	17.3	56.6	18.5	38.0	1.5	S. & W.	7.5	17	3.6	...	...	...	...	...	9 P.M.		
TRURO, Dr. C. Barham.	April	50° 17'	5° 4' W.	...	...	°	...	61.0	35.0	53.8	43.3	48.5	10.5	26.0	1.2	N. & N.E.	6.5	19	4.8	...	...	...	...	...	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.	
	May	50° 12'	5° 4' W.	...	...	°	...	70.0	41.0	63.5	48.5	56.0	15.0	29.0	0.6	E.	2.4	6	0.6	...	...	...	...	...	3 P.M.		
	June	50° 8.5'	5° 4' W.	...	...	°	...	66.0	43.0	61.7	51.7	56.7	10.0	23.0	0.9	W. & S.W.	7.1	20	4.0	...	...	...	...	...	9 P.M.		
TORQUAY. Edward Vivian, Esq.	April	50° 45'	3° 41' W.	...	...	°	42.5	65.0	37.0	54.9	44.5	49.7	10.4	28.0	2.3	N.E.	4.5	18	4.1	...	...	...	...	...	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.	
	May	50° 45'	3° 41' W.	...	...	°	58.9	72.0	46.0	65.1	49.2	62.1	15.9	26.0	2.0	N.E.	2.0	4	1.3	...	...	...	...	...	3 P.M.		
	June	50° 3.2'	3° 41' W.	...	...	°	53.2	70.0	47.0	63.9	53.4	58.6	10.5	23.0	2.6	S.W.	6.5	16	3.7	...	...	...	...	...	9 P.M.		
EXETER, Dr. Shapter.	April	50° 45'	3° 41' W.	49.5	45.4	°	40.8	72.5	38.0	56.6	40.9	48.6	16.1	12.5	1.5	N. & E.	2.8	16	3.7	1.0	0.719	3.8	535	140	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.	
	May	50° 45'	3° 41' W.	62.6	57.1	°	53.1	77.5	38.5	69.0	46.9	57.9	22.1	39.0	2	E.	1.0	6	1.4	1.7	0.729	5.7	526	...	3 P.M.		
	June	50° 7'	3° 41' W.	60.7	56.7	°	53.5	76.5	40.5	66.1	50.3	58.2	15.8	36.0	2.5	N.	3.5	20	3.3	1.3	0.777	5.8	523	...	9 P.M.		
BRIGHTON, BLACK ROCK, J. O. N. Rutter, Esq.	April	50° 50'	0° 9' W.	48.2	45.5	°	42.3	68.0	30.0	52.3	41.9	48.1	10.4	38.0	...	S.E.; N.E. & S.W.	5.9	16	...	3.3	0.7	0.818	4.2	538	60	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.
	May	50° 50'	0° 9' W.	59.3	57.0	°	55.1	72.0	38.0	64.2	48.3	57.9	15.9	31.0	...	N.E.; N.E. & S.W.	1.7	5	...	4.9	0.8	0.871	5.5	531	...	3 P.M.	
	June	50° 30.5'	0° 9' W.	61.3	59.4	°	58.0	74.0	44.0	64.6	52.5	60.1	12.1	30.0	...	S.W. & N.E.	5.4	18	...	5.4	0.6	0.805	6.0	525	...	9 P.M.	
CHICHESTER, Wm. Hills, Esq., Curator of Philosophical Institution.	April	50° 50'	0° 46' W.	...	...	°	...	41.1	70.0	30.0	55.9	40.8	48.3	15.1	40.0	...	N. & N.W.	...	...	...	...	...	...	...	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.	
	May	50° 50'	0° 46' W.	...	...	°	...	45.6	77.0	37.0	68.1	48.2	58.2	19.9	10.0	...	S. & S.W.	...	...	...	...	...	...	...	9 P.M.		
	June	50° 50'	0° 46' W.	...	...	°	...	45.1	73.0	41.0	64.1	50.4	57.2	13.7	32.0	...	S. & S.W.	...	...	...	...	...	...	...	9 P.M.		
SOUTHAMPTON, John Drew, Esq.	April	50° 55'	1° 21' W.	50.1	47.0	°	43.9	73.2	28.0	58.8	39.3	49.0	19.5	45.2	0.6	S.E.	7.0	15	3.2	3.5	0.8	0.808	4.2	536	51	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.
	May	50° 55'	1° 21' W.	61.6	56.1	°	52.3	79.5	37.0	71.6	45.7	58.6	25.9	12.5	0.5	S.W.	2.5	4	0.7	1.7	0.723	5.5	528	...	3 P.M.		
	June	50° 55'	1° 21' W.	59.8	56.8	°	51.7	81.5	43.5	69.5	51.2	60.3	18.3	38.0	1.0	W.S.W.	7.3	18	6.7	1.9	0.9	0.813	6.0	525	...	9 P.M.	
UCKFIELD, C. L. Prince, Esq., Surgeon.	April	50° 59'	0° 5' E.	50.5	46.6	°	43.1	77.0	29.0	57.9	39.6	48.8	18.3	48.0	...	N.E.	...	17	3.1	3.3	1.1	0.766	4.0	535	180	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.
	May	50° 59'	0° 5' E.	62.9	55.6	°	50.4	80.8	31.0	65.0	43.9	58.2	28.6	16.0	...	E.	...	6	0.8	4.2	2.2	0.651	5.2	526	...	3 P.M.	
	June	50° 59'	0° 5' E.	60.9	56.3	°	52.8	82.5	32.0	71.0	46.8	50.2	59.1	17.8	11.0	...	S.W.	...	18	3.9	1.6	1.5	0.757	5.6	526	...	
BECKINGTON, Rev. C. Blathwayt, A.M.	April	51° 24'	2° 22' W.	47.7	45.5	°	42.8	71.0	24.0	57.4	38.6	48.0	18.8	50.0	1.3	NE. & W.	6.8	21	3.3	3.4	0.5	0.819	4.0	536	265	9 A.M.	At HELSTON.—In the number of days on which rain fell, those distin-guished by fog or mist are included.
	May	51° 24'	2° 22' W.	61.0	54.3	°	49.1	83.0	33.0	72.4	43.4	57.9	29.0	50.0	1.2	S.W.	3.0	5	1.3	4.1	2.0	0.632	5.0	527	...	3 P.M.	
	June	51° 24'	2° 22' W.	53.8	55.4	°	52.5	78.0	38.0	67.3	48.0	58.0	19.3	40.0	1.5	S.W.	6.5	20	4.6	1.6	1.1	0.814	5.6	521	...	9 P.M.	

HELSTON,  
M. P. Moyle, Esq.FALMOUTH,  
Lovell Squire, Esq.TRURO,  
Dr. C. Barham.TORQUAY,  
Edward Viotin, Esq.EXETER,  
Dr. Shapter.BRIGHTON, BLACK ROCK,  
J. O. N. Rutter, Esq.CHICHESTER,  
Wm. Hills, Esq., Curator of  
Philosophical Institution.SOUTHAMPTON,  
John Dren, Esq.UCKFIELD,  
C. L. Prince, Esq., Surgeon.BECKINGTON,  
Rev. C. Blathwayt, A.M.

At HELSTON.—In the number of days on which rain fell, those distinguished by fog or mist are included.

At TORQUAY the mean temperature of the dew point for May was returned to 58.9, it is altered conjecturally to 48.9; the mean of the minimum thermometer readings in May was returned 59.2, it is altered conjecturally to 49.2. The readings of the dry and wet bulb thermometers from which the dew point has been deduced, should have been returned.

At HELSTON.—A note is appended to the report, stating that the mean highest readings of the S. R. thermometer are included in the numbers column 12. This should not have been there: there is something apparently wrong in the ranges of the thermometer readings which is probably attributable to this cause.

UCKFIELD.—Thunderstorms on June 12 and 23. Evaporation 25 in. in April; 45 in. in May, and 3.4 in. in June.







Year	Months	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS					WIND	Amount of Clouds 0—10	RAIN		Deductions relative to the Humidity of the Atmosphere					Daily Observations taken at	REMARKS			
							Dry Bulb	Wet Bulb	Temperature of the Dew Point	Self-registering					Average strength 0—6		Amount in inches which it fell		Humidity						
							Mean of daily Observations	Mean of daily Observations	Observed	Highest during the month	Lowest during the month	Mean of the highest on each day	Mean of the lowest on each day	Approximate mean temp. of the month	Average daily range of the thermometer readings	Range of the thermometer in the month		Mean weight of Vapour in a cubic foot of Air	Mean additional weight of Vapour required to saturate a cubic foot of Air	Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere	Weight of a cubic Foot of Air	Height of the station above the Sea in feet		
1848	April	52° 7'	0° 25' W.	29.64	0.291	29.346	50.7	47.1	43.2	73.0	29.0	56.1	38.3	47.2	17.8	44.0	...	gr.	1.0	0.771	in.	gr.	...	9 A.M.	THWAITE.—Thunder was heard and rain fell heavily on May 20. A severe thunder storm on June 12, between the hours of 8 a.m. and 11 p.m., during which much injury was done to trees and buildings.
	May	...	...	29.96	0.403	29.557	67.0	57.7	52.3	81.0	33.0	71.7	13.4	57.5	28.3	48.0	...	2.8	0.619	4.1	536	...	2 P.M.		
	June	...	...	29.70	0.452	29.248	63.9	5.0	5.5	78.0	39.0	68.9	49.6	59.2	19.3	39.0	...	1.6	0.756	5.6	522	...			
	April	52° 8'	0° 16' E.	...	...	...	...	...	...	76.0	33.0	...	...	...	43.0	...	...	...	...	...	...	...	200		CAMBRIDGE.—I think these barometer readings are too high by 0.1 in. Has the correction to reduce the readings to those of the Royal Society's barometer been applied?
	May	...	...	...	...	...	...	...	...	84.0	35.0	...	...	...	49.0	...	...	...	...	...	...	...			
	June	...	...	...	...	...	...	...	...	80.0	46.0	...	...	...	34.0	...	...	...	...	...	...	...			
	April	52° 12'	0° 6' E.	29.743	0.287	29.456	49.7	46.1	42.4	71.8	30.7	53.6	39.6	46.6	14.0	41.1	0.7	0.9	0.779	4.0	536	88	9 A.M.	Nonwith.—The amount of evaporation in April was 1.1 in.; in May was 4.2, and in June, the wet bulb thermometers were not in use after the 21st of June.	
	May	...	...	30.065	0.384	29.681	61.3	56.2	50.8	95.3	34.7	70.6	46.1	58.4	24.5	44.8	0.4	2.4	0.637	5.3	526	...	3 P.M.		
	June	...	...	29.768	0.431	29.337	62.2	57.5	54.3	79.5	42.9	68.5	50.9	39.7	17.6	36.6	0.7	1.5	0.766	5.9	522	...			
	April	52° 37'	1° 16' E.	29.645	0.318	29.327	53.1	49.2	45.3	73.0	31.0	55.5	39.5	47.5	16.0	42.0	...	1.1	0.766	4.1	531	39	Every day except midnight and 3 h. A.M.	LIVERPOOL.—The readings of the barometer in June is evidently erroneous; it is too great by 0.3 in. at least. The maximum readings of the thermometer seem to be all too high.	
	May	...	...	30.038	0.371	29.667	64.7	55.2	49.6	81.0	33.0	73.5	45.7	59.6	27.8	53.0	...	1.6	0.688	5.1	528	...			
	June	...	...	29.701	0.445	29.256	62.8	58.8	50.5	80.0	44.0	68.8	50.3	59.6	18.5	36.0	...	1.6	0.788	6.1	522	...			
	April	52° 40'	1° 7' W.	29.620	...	...	...	...	...	83.0	29.0	59.7	37.8	47.2	21.9	54.0	2.4	...	...	...	...	150	9 A.M.	LIVERPOOL.—The readings of the barometer in June is evidently erroneous; it is too great by 0.3 in. at least. The maximum readings of the thermometer seem to be all too high.	
	May	...	...	29.910	...	...	...	...	...	9.0	31.0	80.2	45.2	61.3	35.0	58.0	1.2	...	...	...	...	...			
	June	...	...	30.041	0.391	...	60.0	53.2	51.2	87.0	41.0	73.0	52.2	62.6	20.8	10.0	1.6	...	...	...	...	...			
	April	52° 41'	0° 43' W.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	EMPIRGHAM.—On April 19, the first swallow was seen. On May 8, the first cuckoo was heard. On May 9, the first wasp was seen. On June 5, when begun to come to ear.	
	May	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
	June	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
	April	52° 55'	1° 28' W.	29.51	0.276	29.234	52.7	47.0	41.2	67.0	26.0	54.1	38.9	46.5	15.2	41.0	...	1.5	0.670	3.8	530	...	3 P.M.	EMPIRGHAM.—On April 19, the first swallow was seen. On May 8, the first cuckoo was heard. On May 9, the first wasp was seen. On June 5, when begun to come to ear.	
	May	...	...	29.85	0.410	29.440	66.2	57.5	52.5	77.0	30.0	58.4	46.3	57.3	22.1	47.0	...	2.7	0.628	5.7	521	...			
	June	...	...	29.53	0.414	29.116	63.4	57.4	53.5	76.0	38.0	65.0	48.6	57.1	17.1	38.0	...	1.9	0.710	5.7	518	...			
	April	52° 57'	1° 10' W.	29.668	0.259	29.409	47.0	44.1	39.4	75.5	27.0	55.4	35.5	40.4	17.9	48.5	...	1.0	0.748	3.4	538	...	Noon	EMPIRGHAM.—On April 19, the first swallow was seen. On May 8, the first cuckoo was heard. On May 9, the first wasp was seen. On June 5, when begun to come to ear.	
	May	...	...	29.962	0.374	29.588	60.7	54.7	50.0	83.0	35.5	73.3	17.5	59.4	27.8	47.5	...	1.8	0.695	5.2	530	...	6 P.M.		
	June	...	...	29.626	0.396	29.230	59.2	55.1	51.8	82.5	40.1	69.6	49.5	59.5	20.1	42.4	...	1.2	0.779	5.5	524	...	11 P.M.		
	April	53° 25'	3° 0' W.	29.739	0.277	29.462	50.9	46.1	41.3	66.8	34.7	53.5	43.3	48.1	10.2	32.1	0.9	1.0	0.748	3.8	538	37	h.m.	HIGHFIELD HOUSE.—The amount of evaporation in April, was 3.8 in.; in May, was 6.7 in.; and in June, was 4.6 in.	
	May	...	...	30.035	0.367	29.668	62.5	54.8	49.5	71.9	42.6	55.0	52.3	59.1	13.6	29.3	...	2.3	0.645	5.1	528	...	1.8 P.M.		
	June	...	...	29.718	0.390	29.328	61.3	55.4	51.3	73.7	48.8	64.4	54.0	59.2	10.4	24.9	1.2	1.8	0.714	5.4	521	...			
	April	53° 41'	1° 30' W.	29.605	0.274	29.335	49.0	45.3	41.0	72.0	23.0	53.9	36.3	45.1	17.5	49.0	1.5	1.0	0.761	3.8	537	145	9 A.M.	HIGHFIELD HOUSE.—The amount of evaporation in April, was 3.8 in.; in May, was 6.7 in.; and in June, was 4.6 in.	
	May	...	...	29.880	0.401	29.178	61.5	57.1	52.8	88.0	29.0	72.0	42.3	57.1	29.7	59.0	1.3	4.6	0.674	5.5	523	...	3 P.M.		
	June	...	...	29.504	0.411	29.093	60.4	56.1	52.9	80.0	38.0	65.3	47.3	56.3	18.0	42.0	1.4	4.7	0.774	5.7	520	...			



## MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING JUNE 30, 1848.—(continued.)

Year	Months	Latitude	Longitude	THERMOMETERS										Wind		Amount of Clouds 0-10	RAIN		Deductions relative to the humidity of the Atmosphere						Height of the station above the Sea in feet	Daily observations taken at	REMARKS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
				Mean Pressure of the Atmosphere of Dry Air			Temperature of the Dew Point		Self-registering					Average strength 0-6			General Direction	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean additional weight of Vapour required to saturate a cubic foot of Air	Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere	Weight of Air in a cubic foot																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Dry Bulb	Wet Bulb	Mean of daily Observations	Deduced	Observed	Highest during the month	Lowest during the month	Mean of the high-est on each day	Approximate mean temp. of the month	Average daily range of the thermometer readings	Range of the Thermometer in the month																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

The barometer at Leicester was made by Casella; those at Brighton, Chichester, Hartwell, Suffolk, Walden, Hereford, York, and Whitehaven have not been stated; and those at the remaining stations were mentioned in the three preceding Quarterly Reports. Those at Heaton, Exeter, Greenwich, Walworth, Maidstone Hill, Lathmer, Norwich, Highfield House, Cadington, Liverpool, and Stonyhurst, have been compared with standards. The dry and wet bulb thermometers at Leicester were made by Casella, and those at Leeds, by Cooke and Ross; those at the other stations have already been mentioned. Of these instruments those at Fulham, Torquay, Greenwich, Maldenstone Hill, Lewisham, Lathmer, Cadington, Norwich, Highfield House, Scarva, Leeds, and Whitehaven, have been compared with standards. Of the thermometers generally at Heaton, they have been made with tubes of equal bore throughout extending from the freezing to the boiling points of water, at the atmospheric pressure of 30 inches, and these points were accurately marked; the tubes were then reduced so as to contain the points 0° and 180°.

The height of the receiving surface of the rain gauge at Torquay is 3 feet; at Cambridge 2 feet 3 inches; at Leicester 30 feet; at Highfield House 28 feet; at Leeds 4 feet; at Watfield 3 feet 4 inches; at Stonyhurst, 1 foot 2 inches; and at Newcastle 3 inches.

It is desirable in future returns that all the information required from every place should be mentioned.

The reduction of the preceding results has been made as follows:—The first step was the application of corrections depending on the time or times of the day at which the observations have been made, to deduce the true monthly values for each result. (For these tables, see the Phil. Trans., part I, for 1848). The next step was the taking the mean of these reduced monthly values, and reducing that for the barometer to the level of the sea, diminishing that at Uckfield by 0-131 in.; and that at Beckington by 0-089 in.; and that at Derby by 0-103 in.; (for these corrections see the Meteorological report for the year 1847, in the 10th annual report of the Registrar General); and in this way the following Quarterly Table was formed.



## QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES	Mean pressure of the Atmosphere of Dry Air reduced to the level of the Sea	Mean temperature of the Air	Highest reading of the Thermometer	Lowest reading of the Thermometer	Mean daily Range of Temperature	Range of the Thermometer	Mean estimated strength 0-6	WIND General Direction	Mean amount of Cloud 0-10	RAIN		Mean weight of Vapour in a cubic foot of Air	Mean additional weight required to saturate a cubic foot of Air	Mean degree of humidity	Mean whole amount of Water in a vertical column of Atmosphere	Mean weight of a cubic foot of Air.	Height of eastern of the Barometer above the level of the Sea.
										Number of days on which it fell	Amount collected						
Helston .....	29.539	53.5	78.0	30.0	15.8	48.0	1.6	.....	4.3	35	8.3	4.0	1.0	0.804	4.7	531	106
Falmouth .....	.....	53.4	77.0	30.0	18.4	47.0	1.5	N.E. & S.W.	5.6	40	8.5	.....	.....	.....	.....	.....	.....
Truro .....	.....	52.1	70.0	35.0	11.8	35.0	0.9	Variable	5.3	45	9.4	.....	.....	.....	.....	.....	.....
Torquay .....	.....	55.1	72.0	37.0	12.3	35.0	2.3	N.E.	4.3	38	9.1	3.8	1.1	0.76	.....	.....	120
Exeter .....	29.549	56.3	77.5	30.0	18.0	47.5	2.0	N.E.	2.4	42	8.4	3.7	1.4	0.725	4.6	530	140
Brighton .....	29.588	54.2	77.5	30.0	12.8	47.5	..	N.E.	4.3	39	..	4.0	1.1	0.778	4.1	533	60
Chichester .....	.....	52.6	77.0	30.0	16.2	47.0	..	N.	..	..	7.6	.....	.....	.....	.....	.....	.....
Southampton .....	.....	54.5	81.5	28.0	21.2	53.5	0.7	S.W.	5.6	37	10.6	4.0	0.9	0.813	4.9	533	.....
Uckfield .....	29.556	55.9	82.0	29.0	21.6	53.0	..	Variable	..	41	7.8	3.9	1.7	0.684	4.7	530	180
Beckington .....	29.572	53.1	83.0	24.0	22.4	59.0	1.3	S.W.	5.4	46	9.2	3.8	1.0	0.819	4.6	532	265
Royal Observatory Greenwich ..	29.570	54.3	80.0	30.2	21.6	49.8	..	E.	5.9	46	7.3	3.8	1.4	0.775	4.7	531	159
Maidenstone Hill, Greenwich ..	29.563	54.2	78.6	30.7	18.9	47.9	..	E.	6.0	41	7.2	3.9	1.1	0.781	4.7	531	107
Lewisham .....	.....	54.4	81.5	29.0	22.2	52.5	..	E.	..	..	..	4.1	1.0	0.815	4.9	.....	40
Walworth .....	29.618	54.8	80.0	35.0	19.0	45.0	3.3	S.W.	5.7	45	6.7	3.8	1.2	0.742	4.5	532	32
Latimer Rectory .....	29.588	53.2	82.0	23.5	26.7	58.5	1.5	N.	5.3	46	7.9	3.8	1.2	0.763	4.6	527	335
Aylesbury .....	29.482	55.0	82.0	28.0	23.3	54.0	0.8	S.	5.8	41	8.0	3.8	1.5	0.718	4.7	529	280
Stone Observatory .....	29.596	53.3	77.9	27.7	19.6	50.2	0.8	Variable	5.3	43	5.8	3.7	1.2	0.754	4.6	529	300
Hartwell House .....	29.581	53.7	84.0	24.0	26.0	60.0	0.8	S.	5.3	..	..	3.8	1.2	0.773	4.6	529	300
Saffron Walden .....	.....	53.2	79.0	29.0	19.0	50.0	2.3	Variable	5.0	51	5.1	4.1	0.8	0.866	4.9	.....	.....
Pool Cottage, Hereford .....	.....	52.5	..	..	..	..	..	Variable	..	41	11.6	.....	.....	.....	.....	.....	.....
Cardington .....	29.594	54.2	81.0	29.0	21.8	52.0	..	S.	5.7	48	7.5	4.0	1.2	0.793	4.9	531	150
Thwaite .....	.....	..	84.0	33.0	..	51.0	..	E.	..	33	7.8	.....	.....	.....	.....	.....	200
Cambridge Observatory .....	29.628	53.6	79.5	30.7	18.7	48.8	0.6	S.W.	6.4	39	5.5	3.8	1.1	0.776	4.6	532	88
Norwich .....	29.482	54.9	84.0	31.0	20.8	53.0	..	Variable	..	..	7.3	4.1	1.1	0.781	5.0	531	39
Leicester .....	.....	..	..	..	..	..	..	S.W.	5.8	47	7.2	.....	.....	.....	.....	.....	150
Empingham .....	.....	..	..	..	..	..	..	Variable	..	45	6.8	.....	.....	.....	.....	.....	.....
Derby .....	29.544	52.5	77.0	26.0	18.1	51.0	..	Variable	..	47	8.5	3.8	1.0	0.798	4.6	531	39
Highfield House, Notts .....	29.541	53.7	83.0	27.0	21.9	56.0	..	Variable	6.2	54	8.3	3.8	1.1	0.778	4.6	533	103
Liverpool Observatory .....	29.561	52.2	71.9	34.7	11.3	37.2	1.0	N.W.	5.9	47	7.0	3.6	0.8	0.835	4.3	537	37
Leeds .....	29.513	50.5	88.0	23.0	21.7	65.0	1.4	Variable	..	59	9.4	3.8	0.9	0.801	4.6	532	148
Wakefield .....	29.452	52.8	85.0	25.0	21.0	60.0	..	W.	..	48	9.4	3.5	1.2	0.739	4.2	.....	113
Stonyhurst Observatory .....	.....	51.1	75.5	27.0	18.1	48.0	0.8	W.S.W.	6.8	51	11.6	3.5	0.9	0.784	4.2	.....	381
York .....	.....	53.4	79.5	27.0	17.3	52.5	..	S.E.	..	48	9.9	.....	.....	.....	.....	.....	50
Scarva, Ireland .....	.....	53.1	77.6	28.1	16.9	49.5	1.9	S.	6.0	34	6.1	3.9	0.9	0.805	4.7	.....	162
Whitehaven .....	.....	52.2	73.0	31.0	13.1	42.1	1.9	S.W.	..	41	6.2	3.7	1.1	0.784	4.6	532	.....
Durham .....	29.565	50.7	76.4	24.5	15.6	51.9	1.4	S.W.	6.0	41	6.2	3.5	1.0	0.779	4.3	530	340
Newcastle .....	29.506	50.6	79.5	26.5	14.2	53.0	..	S.W.	..	36	5.6	3.9	1.2	0.887	4.8	531	121

From the numbers in the first column it seems that the volume of dry air was the same at all parts of the country. The mean of all these results is 29.554 inches, and this value may be considered as the pressure of dry air for England during the Quarter ending June 30, 1848.

From the numbers in the second column, it seems that the mean temperature of the air for the Quarter ending June 30, 1848, in the counties of Cornwall and Devonshire was 54° 1; at places situated south of latitude 52° was 54° 0; between the latitudes of 52° and 53° was 53° 6; between the latitudes of 53° and 54° was 52° 0; and of Durham and Newcastle was 50° 7.

The average daily range of the temperature of the air in Cornwall and Devonshire was 15° 3; at Brighton, Liverpool, and Whitehaven was 14° 9; south of the latitude of 52° was 21° 3; between the latitudes of 52° and 53° was 20° 3; between the latitudes of 53° and 54° was 19° 5; and of Durham and Newcastle, was 14° 9.

The greatest mean daily ranges took place at Latimer, Hartwell, Aylesbury, and Beckington respectively; and the least occurred at Liverpool, Brighton, Whitehaven, and Newcastle respectively.

The highest thermometer reading during the quarter was at Leeds, which was 88°, and the lowest was also at Leeds, viz. 23°. The extreme range of temperature in England, during the quarter, was therefore 65°; but this is probably somewhat too great.

The average quarterly range of the reading of the thermometer in Cornwall and Devonshire was 42° 5; at Brighton Liverpool, and Whitehaven, was 37° 7; at all other places except Beckington, Hartwell, Leeds, and Wakefield, was 51° 5.

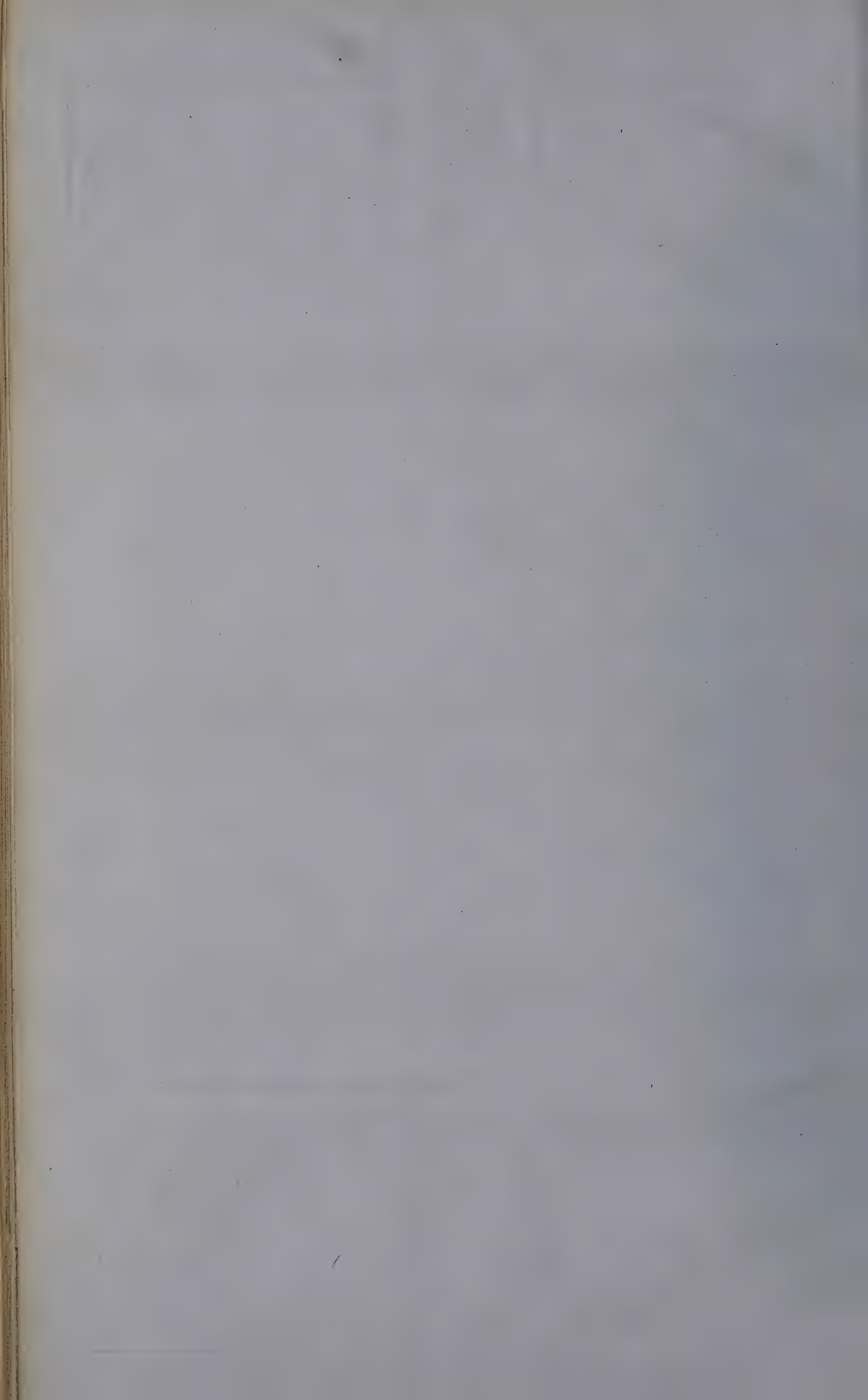
The direction of the wind has been so variable, that it is not possible to determine its mean direction. Observers in adjacent localities have estimated it differently; at all places its strength seems to have been unusually small.

From the numbers in the ninth column the distribution of cloud seems to have been the same at all places, and such as to cover about one-half of the sky. This value is much less than the average amount of cloud.

The fall of rain during the quarter has greatly exceeded the average amount for the season; the amount in May was much below the average for that month: in the months of April and June the amount was unusually large, particularly in the latter month. The places at which rain fell on the greatest number of days were Leeds, Nottingham, Stonyhurst, Saffron Walden, &c. &c.; and on the smallest number of days were Thwaite, Scarva, Helston, Newcastle, &c. The places at which the largest falls have taken place were, Hereford, Stonyhurst, Southampton, York, Leeds, Wakefield, &c.; and the places where the falls have been the least in amount, are Saffron Walden, Cambridge, Newcastle, Stone, &c.; but it would seem that the amount at the last mentioned place is wrong (see the amounts at Hartwell and Aylesbury). Generally the largest falls have been in Yorkshire, and the smallest in the counties N. of Yorkshire.

The numbers in columns 12 to 16 shew the mean values of the hygrometrical results at every station; from which we find, that  
 The mean weight of vapour in a cubic foot of air for England (excepting Cornwall and Devonshire) in the quarter ending June 30, 1848, was 3.8 grains.  
 The mean additional weight required to saturate a cubic foot of air ..... was 1.1 grains.  
 The mean degree of humidity (complete saturation = 1) ..... was 0.778  
 The mean amount of vapour mixed with the air would have produced water, if all had been }  
 precipitated at one time on the surface of the earth, to the depth of ..... was 4.6 inches.  
 The mean weight of a cubic foot of air at the level of the sea, under the mean temperature, humidity, and pressure, ..... was 534 grains.  
 And these values for Cornwall and Devonshire were 3.8 grains; 1.2 grains; 0.765; 4.7 inches; and 534 grains respectively.  
 The results from the station in Ireland, agree very closely with those in England in the same parallel of latitude, excepting those depending on the water mixed with the air; and in these respects an excess of humidity is shewn at this station.







# RETURN

OF THE

## Mortality in 117 Districts of England,

For the Quarter ending September 30th, 1848.

ANNUAL SERIES VII.] PUBLISHED BY AUTHORITY OF THE REGISTRAR GENERAL. [1848.—No. 3.

### STATE OF THE PUBLIC HEALTH IN THE THIRD QUARTER OF THE YEAR 1848.

“ The Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6612958 in 1841.”

The mortality in the Quarter is below the average. Only 43445 deaths were registered; which is less by 6034 than the 49479 deaths registered in the corresponding Quarter of 1847, and 7960 less than 51405—the number registered in the September Quarter of 1846. The mortality of the country, it should be recollected, was low in the 3 years 1843, 1844, 1845, and in the first Quarter of 1846; a slight increase took place in the spring Quarter of 1846; in the summer a great mortality broke out, and continued through the autumn, as well as the whole of the year 1847, until influenza raged epidemically at the close of the year 1847, and was then and in the winter of 1848 fatal to thousands. A remarkable improvement was apparent in the spring of the year 1848, and was still more obvious in the summer quarter. While the deaths in the summers of 1846, 1847, were 8660 and 5986 above—the deaths in the summer of 1848 were 809 below—the corrected average. The facts are shewn more clearly in the tables than they can be described.

DEATHS REGISTERED in each of the Four Quarters of the Nine Years 1839—1847, and in Three Quarters of the Year 1848, in 117 of the DISTRICTS of ENGLAND and WALES.

Quarters ending	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
March .....	42,410	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
June .....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,734	51,585	46,552
September .....	37,317	39,498	36,058	39,409	36,953	38,933	36,139	51,405	49,479	43,445
December .....	41,740	44,186	39,292	39,662	42,608	44,080	39,291	53,093	57,925	....
TOTAL .....	162,711	172,134	161,450	162,543	163,652	168,126	166,273	192,082	215,094	....

	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
Deaths registered in the June Quarters of 10 years .....	37,317	39,498	36,058	39,409	36,953	38,933	36,139	51,405	49,479	43,445
Deaths which would have been registered if the mortality had been uniform, and the Numbers had increased from 1839 at the rate of 1·75 per cent. annually. Deduced from the average of 1839—47.	37,857	38,519	39,193	39,879	40,577	41,287	42,010	42,745	43,493	44,254
UNHEALTHY SEASONS Difference above the calculated number .....	..	979	..	..	..	..	..	8,660	5,986	..
HEALTHY SEASONS Difference below the calculated number .....	540	..	3,135	470	3,624	2,354	5,871	..	..	809

The improvement in the public health is considerable in all the divisions except London. The deaths in the districts of Lancashire and Cheshire in the September Quarters of 1846, 1847, 1848, were 15221, 17080, 11720. In the same years the deaths in the districts of Yorkshire were 5708, 4708, and 4404; in the northern districts 2988, 2291, and 1812: in the north midland districts 1902, 1604, 1369; in the western, including the iron districts, 6276, 5041, 4755.



The deaths in Brighton were 349 in the Quarter ending September 1848; in the corresponding Quarter of 1847, they were 260. It appears that diarrhoea prevailed there and was fatal to young children. The mortality in Oxford, Northampton and Bedford, Colchester, Ipswich, Norwich, and Yarmouth, was high in 1846, and fell near the average in 1848. Diarrhoea was nevertheless fatal to children at Ipswich and Yarmouth. Scarlatina and small pox were epidemic in many parts of the country. The mortality was above the average in the district of St. Thomas (surrounding Exeter), in Plymouth, Redruth, and Penzance. Small pox, measles, and scarlatina, prevailed generally in the south western division. The Registrar of Heavitree, St. Thomas, notices cases of malignant typhus, which occurred in a family very badly fed. The other members of the family had fever, but recovered. The disease did not spread. Dysentery, which is rarely epidemic in England, caused 65 deaths in Penzance, and was also fatal to many persons in Marazion, the neighbouring sub-district. The Registrar of the latter district says it was "principally with the poor," and he ascribes it "to the dampness of the season and impoverished diet." In Bristol, Clifton, Stroud, the deaths in the quarter were more numerous than in the corresponding quarter of 1848. Scarlatina, small pox, and whooping cough, were epidemic. The mortality declined rapidly in the summer quarters of 1846, 1847, 1848, in Worcester, Kidderminster, Dudley, Walsall, Wolverhampton, Wolstanton, Birmingham, and Coventry—the principal seats of the carpet, iron, pottery, and silk trades. Diarrhoea, however, prevailed in several of these districts; and particularly in Dudley, Walsall, Coventry, and Birmingham, where it was so fatal in 1846. There was one death from common cholera in Wolverhampton. The deaths declined rapidly in Leicester, Lincoln, Nottingham, Basford, and Derby; in the September quarters of 1846—7—8, they were 1902, 1604, and 1369. The deaths in Nottingham were 467, 442, and 311. The registrar of St. Ann, Nottingham, says—

"The improvement may be attributed to the comparative cheapness of provisions, to the infrequency of fever consequent upon the diminution of Irish immigration, and the almost total absence of diarrhoea. The number of old persons carried off last year, was so vast, that fewer than the usual proportion of that class, survived to swell the returns of subsequent times.

A diminution in the mortality is equally conspicuous in the great seats of the cotton manufactories. The deaths in the districts of Cheshire and Lancashire during the summer quarters of 1846—7—8, were 15221, 17080, and 11720. Epidemics of scarlatina and diarrhoea are noticed as causes of death by several of the Registrars. The deaths in Hulme, (Chorlton) were 438; and in the corresponding quarter of 1846 the deaths were 479. "At that period there was scarcely a house unoccupied in the township of Hulme, while at this time there "are nearly 1000 houses without tenants." The Registrar of Deansgate, (Manchester,) makes an important practical remark respecting scarlatina, which is now so prevalent and so frequently followed by dropsy.

"The mortality has not generally occurred during the early stages or actual progress of the fever, but has resulted from the dropsical effusion following it. This is in very many cases induced by the carelessness of the parents, or other attendants of the children of the poor, for before they are well recovered from the fever, they are allowed to run out of doors; and during the wet weather, from constant exposure to the rain, inflammatory affections supervene, and cause effusion and death. \* \* \* Scarlatina and other infectious diseases are rendered much more extensive by the utter want of ventilation in the dwellings of the poor. \* \* \* When scarlatina once gets into these small, crowded, ill-ventilated dwellings, it is almost sure to affect successively almost the whole of the occupants."

The Registrar of Middleton, Oldham, ascribes the health of his sub-district to the "exceedingly low price of provisions."

A few cases of common cholera are referred to in the Lancashire districts. The population of some parts, like Hulme, has probably diminished; in others it has increased slowly; and the Irish immigration into Lancashire appears now to have ceased, or to excite no remark. But the health of the Lancashire people has unquestionably been better during the summer of 1848 than in that of 1846; after allowing for the operation of those changes which reduce the deaths without implying a diminution of the rate of mortality—that is, of the proportion the deaths bear to the population during a given time.

The mortality which in the summer of 1846 was excessively high in Sheffield, Huddersfield, Halifax, Bradford, Leeds, and Hull, was little above the average of preceding years in 1848. The deaths in Leeds, and Hunslet, during the three summer quarters of 1846—8, were 1368, 1328, and 1158; in Hull, 488, 401, and 336. Diarrhoea and dysentery have been prevalent and fatal in Leeds. The deaths in Myton (Hull) were 218; of which 61 were by zymotic diseases, including 39 cases of diarrhoea, 4 of cholera, 4 of remittent fever, 3 of typhus. The mortality which in 1846 was so high in Sunderland, Gateshead, Tynemouth, Newcastle-on-Tyne, Carlisle, and Cockermouth, fell to a point near the average of the years preceding 1846. The deaths in the summer quarters of 1846—7—8, were 2988, 2291, and 1812.

The deaths in the Welsh districts have been nearly stationary since 1846. In Merthyr Tydfil the deaths were 374, 436, and 310 in the summer quarters of 1846—7—8.



The pressure of mortality has slightly increased in London, though it has abated in the country. While deaths of the four summer quarters 1845—8, in the country districts were 25152, 38804, 36292, and 29942, deaths in London were 10987, 12601, 13187, and 13503. Influenza it will be recollected was much more fatal in London than in the country. The increased mortality of London is principally owing to the deaths in diseases of the zymotic class, increasing in the four summers 1845—8, from 2437, to 5162. Scarlatina has been more fatal in the last than in any previous summer quarter since the new tables commenced. It destroyed 100 lives in 13 weeks, or 1079 more than the average. The epidemic presented this singularity, that the deaths in the summer quarters 1841—4, were 193, 392, 548, 1020; and again 194, 208, 316, 1560, in the summer quarters 1845—8; which justifies the hope that the mortality from this disease next year will not be considerable. Small pox notwithstanding the facilities for vaccination was fatal to 100 persons—children being the most liable to be vaccinated. Typhus destroyed 882 lives in London; the epidemic has prevailed since 1846, and is slowly declining. 128 persons died of erysipelas; 52 women of metritis, and 57 of other accidents in child-bearing. 156 persons died in the 13 weeks of fractures and contusions; 26 of gunshot, and other wounds; 116 by drowning; 36 by hanging; 31 of burns and scalds; 15 of poison. The deaths of 15 persons were ascribed directly to intemperance; of 33 to *delirium tremens*—a disease generally caused by intemperance. Only 2 deaths were directly referred to privation; 4 deaths were ascribed to neglect; 59 to the want of mother's milk. It is gratifying to observe that there has been no death from hydrophobia in London during the last five summers; a result which may be fairly ascribed to judicious police regulations. Consumption the enemy of mature life, carried off 1534 victims. The fatality of this and of other diseases of the tubercular class remains almost invariable, allowing for differences of nomenclature; the deaths in the eight various summers of 1841—8, were 2400, 2511, 2428, 2275, 2199, 2659, 2370, 2221.

Dysentery was rather more fatal than in previous years. Every summer there have been many deaths from diarrhoea; in the summers of 1846—7—8, diarrhoea was epidemic, and fatal to 1549, 1196, and 1048 cases; cholera was fatal in the same season to 197, 98, and 153 lives. The mortality from these diseases for the last 9 years is shewn in the annexed tables.

DEATHS from DIARRHOEA in each of the Four Quarters of the Years 1840—48.

Quarters ending	March	June	September	December
1840	57	62	279	62
1841	68	65	228	112
1842	81	63	489	87
1843	69	50	455	268
1844	79	83	414	129
1845	109	84	449	199
1846	119	153	1549	331
1847	178	202	1196	400
1848	244	239	1048	....

DEATHS from CHOLERA in each of the Four Quarters of the Years 1840—48.

Quarters ending	March	June	September	December
1840	3	4	53	6
1841	1	1	23	3
1842	..	7	106	13
1843	6	8	60	14
1844	4	9	47	5
1845	4	2	26	11
1846	7	9	197	15
1847	3	4	98	12
1848	9	17	153	....

Cases of cholera have been every year registered in London. The deaths in the eight summer quarters 1840—8, were 53, 23, 106, 60, 47, 26, 197, 98, 153; the deaths in the same seasons from diarrhoea were 228, 489, 455, 414, 449, 1549, 1196, 1048. Both these diseases were fatal to adults between the ages of 15—60; and to old people; but the great majority of the cases occurred in children. In the 13 weeks of the present year ending September 30th, the deaths of 90 children under 15; 37 men and women of the age of 15—60, and 30 of the age of 60 and upwards were referred to cholera. The duration of the attack in adults varied from 16 hours to several days.

So far as the returns down to the end of September go—I may repeat what I stated three months since, that, “there is no trace of the epidemic of cholera in England.” The subsequent weekly returns for London only confirm the suspicion then expressed, that the epidemic might as in 1831, reach England in October.

The meteorology of the seasons is exhibited by the returns with which I have been favoured by observers residing in different parts of the country. The results have been discussed with great labour and care by Mr. Glaisher.



# TABLE OF THE DEATHS

In 117 of the Districts of England (including the principal Towns): shewing the Number of Deaths Registered in the Quarters ending September 30th.

Parts of Divisions and Districts	Population 1841	Deaths Registered in the Quarters ending September 30th.									
		Years									
		1840	1841	1842	1843	1844	1845	1846	1847	1848	
Total .....	6612958	39498	36058	39409	36953	38933	36139	51405	49479	43445	
Ditto, exclusive of London .....	4664589	28125	25332	28024	25544	26957	25152	38804	36292	29942	
Aggregate Deaths in the 11 Divisions of England.											
1 London .....	1948369	11373	10726	11385	11409	11976	10987	12601	13187	13503	
2 South Eastern .....	218181	1059	1094	1206	1043	1120	870	1451	1228	1278	
3 South Midland .....	155225	832	785	745	719	840	804	1086	833	786	
4 Eastern .....	128921	883	606	786	626	681	659	1017	637	743	
5 South Western .....	327869	1781	1541	1854	1545	2065	1366	1688	1378	1593	
6 Western .....	776002	4793	4221	4850	3829	4657	3798	6276	5041	4755	
7 North Midland .....	234771	1545	1204	1390	1264	1299	1340	1902	1604	1309	
8 North Western .....	1530460	10175	9128	10212	9960	9617	9490	15221	17080	11720	
9 York .....	691131	3829	3501	3911	3871	3761	3910	5708	4708	4404	
10 Northern .....	328902	1904	1877	1918	1608	1699	1600	2988	2291	1812	
11 Welsh .....	273127	1324	1375	1152	1079	1308	1315	1467	1492	1482	
Districts.											
+ London .....	301326	1597	1499	1638	1664	1822	1559	1815	1936	1906	
West Districts .....	376610	2161	1919	2129	2065	2342	1872	2452	2543	2609	
North Districts .....	374711	2124	2152	2154	2123	2190	2075	2201	2452	2388	
Central Districts .....	393247	2477	2382	2540	2547	2547	2637	2859	2948	3052	
East Districts .....	502475	3014	2774	2924	3010	3075	2844	3274	3308	3548	
S. Eastern Division											
Maidstone .....	32310	147	132	207	171	160	124	239	213	168	
Brighton .....	46742	258	279	310	226	232	219	364	260	349	
Isle of Wight .....	42547	197	211	172	149	186	121	178	150	190	
Poole Island .....	53036	256	281	285	327	345	239	433	397	377	
Winchester .....	23044	116	105	141	106	97	89	141	135	107	
Windsor .....	20502	85	86	91	64	100	78	96	73	87	
S. Midland Division											
St. Albans .....	17051	76	53	84	65	100	85	114	65	86	
Wycombe .....	34150	187	156	146	145	180	141	156	129	152	
Oxford .....	19701	91	126	101	93	90	89	194	88	90	
Northampton .....	28103	157	158	165	148	162	182	220	179	150	
Bedford .....	31767	150	158	136	146	175	182	255	236	172	
Cambridge .....	24453	171	134	113	122	133	125	147	136	136	
Eastern Division											
Colchester .....	17790	121	94	92	76	125	89	127	118	99	
Ipswich .....	25254	156	104	171	141	135	119	240	143	198	
Norwich .....	61846	474	291	384	302	306	308	454	243	306	
Yarmouth .....	24031	132	117	139	107	115	143	196	133	140	
S. Western Division											
Devizes .....	22130	83	99	105	121	84	95	115	105	103	
Dorchester .....	23380	89	90	104	134	99	97	114	99	95	
Exeter .....	31333	226	256	172	184	160	100	191	175	142	
St. Thomas .....	47105	202	186	222	177	210	149	233	145	195	
Plymouth .....	36527	203	134	343	182	257	191	279	193	298	
Redruth .....	48062	226	184	288	169	419	172	175	178	193	
Penzance .....	50100	250	222	283	230	475	166	219	186	285	
Bath .....	69232	502	370	337	348	361	336	362	297	282	
Western Division											
Bristol .....	64298	581	410	435	330	435	347	405	349	468	
Clifton .....	66233	405	343	425	287	350	323	436	340	401	
Stroud .....	38920	156	149	139	155	185	163	189	148	210	
Cheltenham .....	40221	220	193	259	189	191	138	195	155	166	
Hereford .....	34427	155	164	201	173	184	172	182	144	120	

Parts of Divisions and Districts	Population 1841	Deaths Registered in the Quarters ending September 30th.									
		Years									
		1840	1841	1842	1843	1844	1845	1846	1847	1848	
Shrewsbury .....	21529	107	117	130	133	169	91	108	151	151	
Worcester .....	27130	166	129	169	142	180	106	173	151	151	
Kidderminster .....	29408	125	101	172	147	167	165	162	111	111	
Dudley .....	86028	465	464	568	399	465	457	745	631	631	
Walsall .....	34274	208	140	244	149	168	157	288	221	221	
Wolverhampton .....	80722	563	434	506	422	523	438	687	771	771	
Wolstanton .....	32669	194	165	210	172	163	164	315	231	231	
Birmingham .....	138187	989	927	904	714	932	694	1023	1161	1161	
Aston .....	50928	334	239	284	234	316	195	468	260	260	
Coventry .....	31028	125	246	204	183	229	188	300	151	151	
N. Midland Division											
Leicester .....	50932	380	306	331	269	339	458	536	341	341	
Lincoln .....	36110	153	184	143	171	143	154	241	209	209	
Nottingham .....	53080	454	299	429	362	394	285	467	441	441	
Basford .....	59634	342	214	294	233	233	262	372	311	311	
Derby .....	35015	216	201	193	229	190	181	281	299	299	
N. Western Division											
Stockport .....	85672	597	417	461	459	462	398	697	568	568	
Macclesfield .....	56018	320	284	345	320	284	255	422	368	368	
Gt. Boughton, & inc. Chester .....	49085	297	272	227	231	208	227	342	277	277	
Liverpool .....	223054	2068	1757	1956	1823	1952	1963	2946	5669	5669	
West Derby, & (adj. Liverpool) .....	88652	516	552	632	562	602	633	1144	1284	1284	
Blackburn .....	75091	419	344	384	383	474	382	552	458	458	
Preston .....	77189	505	390	482	463	450	458	641	521	521	
Rochdale .....	60577	344	299	300	345	316	302	427	320	320	
Bury .....	77496	384	398	436	370	380	385	643	481	481	
Bolton .....	97519	666	524	548	542	534	594	821	738	738	
Wigan .....	66032	432	296	357	417	353	316	611	556	556	
Prescot .....	43739	202	211	219	170	174	212	322	348	348	
Chorlton .....	93736	475	522	679	710	653	607	1098	822	822	
Manchester .....	192408	1480	1382	1611	1729	1442	1363	2354	2783	2783	
Salford .....	70228	481	533	523	493	416	438	795	549	549	
Ashton & Oldham .....	173964	989	947	1052	943	917	897	1406	1332	1332	
York Division											
Sheffield .....	85076	574	413	501	507	493	446	1039	561	561	
Huddersfield .....	107140	436	442	444	525	447	470	718	621	621	
Halifax .....	109175	443	458	488	532	458	565	642	559	559	
Bradford .....	132164	657	659	820	801	861	990	1111	850	850	
Leeds & Hunslet .....	168667	1083	970	1133	1003	997	943	1368	1328	1328	
Hull .....	41130	385	310	270	276	258	273	488	401	401	
York .....	47779	251	249	255	227	247	223	342	391	391	
Northern Division											
Sunderland .....	56226	396	370	352	291	267	291	475	461	461	
Gateshead .....	38747	258	242	251	198	225	165	473	279	279	
Tynemouth .....	55625	301	290	359	300	239	293	508	323	323	
Newcastle-on-Tyne .....	71850	475	536	458	394	414	421	857	536	536	
Carlisle .....	36084	164	193	181	144	164	152	281	279	279	
Cockermouth .....	35676	144	130	143	145	146	131	203	245	245	
Kendal .....	34694	166	116	174	136	154	147	191	168	168	
Welsh Division											
Abergavenny .....	50834	259	309	254	202	250	254	294	289	289	
Pontypool .....	25037	116	137	132	89	97	132	119	127	127	
Merthyr Tydfil .....	52864	299	337	261	228	397	302	374	436	436	
Newtown .....	25958	117	126	79	110	101	135	86	120	120	
Wrexham .....	39542	223	180	167	165	163	160	224	164	164	
Holywell .....	40787	171	166	143	156	178	183	210	200	200	
Anglesey .....	38105	139	120	116	129	122	149	160	156	156	

\* The last Quarter for the London returns ended September 30th, 1848.

† The Mortality of the Districts of Wandsworth, and Lewisham, and Sub-District of Hampstead, is included in the above Table, in each of the nine Years, though the deaths in Wandsworth did not appear in the Weekly Bills of Mortality.

& The former District of Ashton is now divided into the Districts of Ashton and Oldham, both of which are included in the above Table, in each of the years 1847 and 1848.

‡ The former District of Leeds is now divided into the Districts of *Leeds* and *Hunslet*, both included in the present Return.

\* The former District of Leeds is now divided into the Districts of *Leeds* and *Hunslet*, both included in the present Return.



# A TABLE OF THE DEATHS IN LONDON FROM ALL CAUSES,

Registered in the Quarters ending September 1841-42-43-44-45-46-47-48.

CAUSES OF DEATH	Quarters ending September*								CAUSES OF DEATH	Quarters ending September*							
	YEARS									YEARS							
	1841	1842	1843	1844	1845	1846	1847	1848		1841	1842	1843	1844	1845	1846	1847	1848
CAUSES	10567	11225	11271	11825	10842	12409	13187	13503	IV.—Cephalitis	155	173	139	164	159	165	131	125
SPECIFIED CAUSES	10453	11116	11204	11790	10802	12364	13158	13450	Apoplexy	194	169	186	237	266	273	276	282
I.—Zymotic Diseases	1882	2277	2671	3256	2437	3255	4102	5162	Paralysis	141	166	175	166	184	221	226	213
SPORADIC DISEASES:—									Delirium Tremens	20	25	32	22	33	44	29	33
—Dropsy, Cancer, and other Diseases of uncertain or variable Seat	704	729	649	614	554	492	548	524	Chorea	..	2	..	2	4	1	1	3
II.—Tubercular Diseases	2400	2511	2428	2275	2199	2659	2370	2221	Epilepsy	41	45	49	54	78	74	70	70
III.—Diseases of the Brain, Spinal Marrow, Nerves and Senses	1495	1464	1418	1516	1476	1466	1416	1369	Tetanus	3	2	5	9	4	2	4	3
IV.—Diseases of the Heart and Blood Vessels	221	223	285	326	371	351	369	377	Insanity	8	7	13	19	8	25	27	16
V.—Diseases of the Lungs and of the other Organs of Respiration	1094	934	900	1031	1060	931	1021	973	Convulsions	813	758	700	721	608	513	521	466
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion	912	1057	1014	904	899	1002	969	858	Disease of Brain, &c.	120	117	119	122	132	148	131	158
VII.—Diseases of the Kidneys, &c.	59	75	67	90	101	138	122	143	V.—Pericarditis	4	5	13	28	12	20	20	30
VIII.—Childbirth, Diseases of the Uterus, &c.	108	94	114	124	120	132	146	103	Aneurism	6	8	11	8	11	10	18	19
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	57	68	78	84	71	116	109	75	Disease of Heart	211	210	261	290	348	321	331	328
X.—Diseases of the Skin, Cellular Tissue, &c.	5	10	7	8	14	17	23	27	VI.—Laryngitis	5	6	10	7	17	25	28	36
XI.—Malformations	7	9	21	25	28	48	54	44	Bronchitis	92	66	82	140	191	271	330	357
XII.—Premature Birth and Debility	265	299	262	287	221	299	298	254	Pleurisy	16	7	17	23	28	30	35	22
XIII.—Atrophy	131	175	154	201	233	473	481	339	Pneumonia	739	626	545	617	600	399	409	388
XIV.—Age	667	691	679	648	569	487	540	399	Asthma	119	83	116	104	101	95	96	64
XV.—Sudden	159	194	118	108	91	63	126	111	Dis. of Lungs, &c.	123	146	130	140	123	111	123	106
XVI.—Violence, Privation, Cold & Intemperance	287	306	339	293	358	435	464	471	VII.—Teething	258	319	275	233	217	138	163	117
XVII.—Small Pox	129	126	75	556	76	51	320	435	Quinsey	15	20	24	32	5	14	16	14
XVIII.—Measles	260	313	352	255	688	78	521	154	Gastritis	322	415	309	15	18	28	24	24
XIX.—Scarlatina	193	392	548	1020	194	208	316	1560	Enteritis	11	12	22	26	31	56	57	62
XX.—Whooping Cough	402	180	336	167	385	355	238	340	Peritonitis	9	11	15	27	19	26	21	31
XXI.—Croup	72	92	76	76	75	66	62	63	Ascites	17	24	39	18	38	43	41	30
XXII.—Thrush	104	115	106	120	105	113	82	77	Ulceration (of Intestines, &c.)	25	17	13	20	18	36	28	25
XXIII.—Diarrhoea	228	489	455	414	449	1549	1196	1048	Hernia	29	35	29	37	29	35	45	38
XXIV.—Dysentery	29	73	121	44	43	75	143	171	Intussusception	6	1	7	3	14	8	18	17
XXV.—Cholera	23	106	60	47	26	197	98	153	Stricture (of the Intestinal Canal)	2	6	7	5	5	11	7	9
XXVI.—Influenza	8	13	18	8	8	6	6	7	Disease of Stomach, &c.	58	41	93	86	93	116	102	75
XXVII.—Purpura and Scurvy	5	4	6	7	11	9	22	13	Disease of Pancreas	..	..	..	..	..	..	..	..
XXVIII.—Ague	3	2	5	6	6	1	6	8	Hepatitis	21	14	21	21	33	71	56	63
XXIX.—Remittent Fever	5	5	5	13	8	12	23	18	Jaundice	23	29	36	28	29	42	41	40
XXX.—Infantile Fever	5	4	9	6	10	9	10	8	Disease of Liver	115	111	118	89	135	162	158	144
XXXI.—Typhus	297	309	446	424	273	403	895	882	Disease of Spleen	1	2	6	..	3	3	1	3
XXXII.—Metria or Puerperal Fever, see Childbirth	..	..	..	..	..	..	..	52	VIII.—Nephritis	6	3	4	5	4	6	5	7
XXXIII.—Rheumatic Fever, see Rheumatism	..	..	..	..	..	..	..	15	Nephria (or Bright's Dis.) see Dis. of Kidneys	..	..	..	..	..	..	..	39
XXXIV.—Erysipelas	49	45	39	85	56	92	126	128	Ischuria	..	2	1	..	..	2	2	3
XXXV.—Syphilis	10	7	13	8	17	28	29	25	Diabetes	4	9	3	2	13	8	9	7
XXXVI.—Noma or Canker see Mortification	..	..	..	..	7	3	9	5	Stone	6	9	3	7	11	9	7	9
XXXVII.—Hydrophobia	..	2	1	..	..	..	..	..	Cystitis	1	2	5	3	3	7	10	8
XXXVIII.—Hæmorrhage	44	47	39	43	36	42	42	54	Stricture of the Urethra	5	10	9	17	11	13	8	12
XXXIX.—Dropsy	416	445	361	350	273	172	205	193	Disease of Kidneys, &c.	37	40	42	56	59	93	81	58
XL.—Abscess	47	34	23	30	19	14	31	21	IX.—Paramenia	4	2	6	1	4	4	6	..
XLI.—Ulcer	3	5	5	1	6	9	20	15	Ovarian Dropsy	9	3	5	5	6	13	3	12
XLII.—Fistula	2	3	5	3	7	3	2	3	Childbirth, see Metria	61	68	76	82	70	80	91	57
XLIII.—Mortification	53	41	56	45	34	34	41	39	Dis. of Uterus, &c.	34	21	27	38	40	35	46	34
XLIV.—Cancer	130	138	156	132	168	195	197	189	X.—Arthritis	..	..	3	1	1	..	3	..
XLV.—Gout	9	16	4	10	11	19	10	10	Rheumatism	31	32	26	31	31	62	45	45
XLVI.—Scrofula	24	24	45	45	32	84	68	86	Dis. of Joints, &c.	26	36	49	52	39	54	61	30
XLVII.—Tabes Mesenterica	74	84	137	136	188	343	306	250	XI.—Carbuncle	1	2	1	1	3	1	3	6
XLVIII.—Phthisis or Consumption	1852	1889	1781	1681	1558	1784	1581	1534	Phlegmon	..	..	1	1	5	7	7	8
XLIX.—Hydrocephalus	450	514	465	413	421	448	415	351	Disease of Skin, &c.	4	8	5	6	6	9	13	13
									XVII.—Intemperance	10	7	12	8	14	29	23	15
									Privation	5	3	13	3	2	3	16	2
									Want of Breast Milk, see Privation & Atrophy	..	..	..	..	..	..	..	59
									Neglect	..	..	..	..	..	..	..	4
									Cold, see Privation	..	..	..	..	..	..	..	..
									Poison	..	..	..	..	..	..	..	15
									Burns & Scalds	..	..	..	..	..	..	..	31
									Hanging, &c.	..	..	..	..	..	..	..	36
									Drowning	272	296	314	282	342	403	425	116
									Fractures and Contusions	..	..	..	..	..	..	..	156
									Wounds	..	..	..	..	..	..	..	26
									Other Violence	..	..	..	..	..	..	..	11
									Causes not specified	114	109	67	35	40	45	29	53

The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan Returns at the commencement of 1847, to the first time. Before the deaths for previous years are not contained in the above table. In the Quarters ending September they were respectively (1840) 161; (1841) 159; (1842) 160; (1843) 138; (1844) 151; (1845) 145; (1846) 192.

Under the head of *sudden deaths* are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by coroners in vague terms, such as "found dead," "natural causes," &c. &c.

In the years previous to 1848, "Worms" and "Infantile Fever," were classed together. The former is now placed to disease of *stomach, &c.*

NOTE.—It will be observed that the classification of the Abstract is now slightly modified in conformity with the second edition of the nosology. The extension of the list is due to the improvements in the character of the returns, which are now made, in 93 cases out of 100, by the medical attendants of the deceased and by the coroners.



**COMPARATIVE METEOROLOGY OF THE SUMMER QUARTERS OF THE YEARS 1846, 1847, & 1848**  
(Deduced from the Greenwich Observations.)

Years	Quarters ending	Mean reading of the Barometer, corrected and reduced to 32 deg. Fahrenheit	THERMOMETERS																In the Water of the Thames at Greenwich by the Self Registering Thermometers read at 9 o'clock A.M.			Difference between the dew point temperature and air temperature			Difference between the mean tem- perature of the quarter, and the mean temperature of the same quarter on an average of 25 years	WIND			The mean weekly amount of Horizontal movement of the air Mean amount of Cloud, 0-10
			Highest during the quarter	Lowest during the quarter	Mean		Difference in degrees	Mean of all observations	Dew Point	Self-Registering		Of the highest on each day from the observations	Of the lowest on each day from the observations	Mean of the dif- ferences	Mean of the greatest on each day	Mean of the least on each day	Pressure in lbs. on the square foot												
					Of the Highest on each day	Of the Lowest on each day				Highest in the sun	Lowest on the grass						General direction	Greatest pressure in the quarter	Mean for the quarter										
Sept..	{	1846	29.797	88.4	83.0	72.3	55.3	17.0	63.1	56.6	115.8	94.5	32.0	47.7	*67.6	65.8	6.5	15.0	0.8	+2.1	..	9.0	0.2	751	6.7	8			
		1847	29.871	86.0	89.0	70.9	52.5	18.4	1.3	54.7	108.5	87.3	30.0	44.1	65.2	62.9	6.6	13.9	1.1	+0.3	..	12.0	0.1	838	6.6	4			
		1848	29.800	84.5	83.2	69.4	50.0	19.4	59.5	52.9	103.8	83.9	23.0	43.1	*63.0	62.0	6.6	12.7	2.0	-0.3	s.w.	9.0	0.2	2910	6.6	9			

\* Mean of 63 observations.

† In the last quarter the average is taken from only 7 Years (1841-47).

‡ Mean weekly, deduced from 74 days

**DEATHS in LONDON from all Causes (exclusive of Violent and Sudden Deaths), and from Diarrhoea, Dysentery and Cholera, in the 13 Weeks of the Summer Quarters 1846, 1847, and 1848.**

Number of Weeks .....	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
Deaths from all causes, exclusive of Violent & Sudden Deaths..	1846 894	882	1026	976	1063	1100	925	870	875	850	880	819	783	11,942
	1847 835	857	921	871	926	910	1070	1043	1054	1002	998	1109	1010	12,636
	1848 963	910	1065	1168	1025	1042	994	923	942	1000	895	1007	1067	13,001
Deaths from Diarrhoea, Dysentery, and Cholera .....	1846 76	98	149	187	218	238	180	169	148	126	87	83	62	1,821
	1847 17	38	47	67	125	128	188	174	157	135	139	117	107	1,431
	1848 69	79	124	213	175	147	98	84	104	86	61	72	60	1,373
Mean Temperature .....	1846 65.0	60.0	64.9	62.6	70.6	66.5	61.8	60.8	62.6	61.6	64.5	60.3	59.2	63.0
	1847 61.3	65.5	70.2	63.1	65.9	62.6	63.2	64.1	60.3	54.3	56.3	54.1	56.1	61.3
	1848 63.0	64.6	62.5	61.6	60.0	58.2	59.0	57.7	59.7	61.2	52.3	56.7	56.7	59.3

Number of Deaths from Scarlatina in each of the Four Quarters of the Eight Years 1841-48.

Years,	March	June	September	December	Total
1841.....	170	133	193	181	677
1842.....	123	196	392	522	1233
1843.....	299	325	548	718	1890
1844.....	536	601	1020	872	3029
1845.....	421	201	194	269	1085
1846.....	221	177	208	322	928
1847.....	196	174	316	747	1433
1848.....	615	816	1560	....	....
Total in 8 Years, 1841-48 inclusive }	1966	1807	2871	* 3631	* 10275

\* Totals in 7 Years.



## REGISTRARS' NOTES.

The following Instruction was addressed to the 447 Registrars in the Country:—

“If at any time the number of deaths registered during the Quarter has been *above the average*, state, in a note at the foot of the Return, whether any epidemic disease, such as Measles, Typhus, &c., has been prevailing in the District, or if there is any other known circumstance which will account for the increase.”

The Registrars alone must be held responsible for the opinions expressed in any of the subjoined Notes.

SUP. REG. DISTRICT	REG. DISTRICT	
MAIDSTONE .....	West .....	Deaths 57: being 2 above the average of the corresponding quarters of 7 years. Diarrhoea has been prevalent. and was fatal in 11 cases.
BRIGHTON .....	St. Peter's .....	Deaths 206: diarrhoea has prevailed to a very considerable extent during the past quarter; it was chiefly fatal to young children.
PORTSEA ISLAND ....	Portsmouth Town .....	Deaths 62: the average of 11 quarters being 54. No predominant disease can be mentioned. With the single exception of the death of a child from diarrhoea and typhus, none have been reported with symptoms the least approaching to cholera.
.....	Landport and Southsea ....	Deaths 136: small pox has been prevalent; 9 cases without vaccination were registered.
WINCHESTER and HURSLEY .....	} Winchester .....	Deaths 71: 18 of these were from scarlatina, chiefly in children under 6 years of age.
ST. ALBANS .....	St. Albans .....	Deaths 63: which is rather above the average; occasioned by typhus and scarlet fever.
CAMBRIDGE .....	St. Andrew the Less .....	Deaths 65: being above the average. Scarlatina and small pox prevail to some extent.
COLCHESTER .....	Third Ward .....	Deaths 39: Scarlet fever has prevailed much.
IPSWICH .....	St. Clement's .....	Deaths 58: There has been a considerable increase in the deaths which have occurred in the present quarter, as compared with the corresponding quarter of last year, owing to the prevalence of diarrhoea, which has been fatal in 13 cases, principally to infants.
.....	St. Margaret .....	Deaths 58: being 15 more than in the corresponding quarter of last year. This increase is principally amongst children attacked with diarrhoea, 8 having died of that disease.
.....	St. Matthew .....	Deaths 82: rather above the average; diarrhoea having proved fatal to children.
NORWICH .....	Costmary .....	Deaths 61: this district has been remarkably free from epidemic diseases this quarter.
GREAT YARMOUTH ..	Northern .....	Deaths 89: being more than in the corresponding quarter of 1847. The deaths from diarrhoea are 14; children have formed the subjects of this disorder. There have been no cases of cholera.
EXETER .....	St. Sidwell .....	Deaths 82: the smallest number registered in any quarter during the last six years.
ST. THOMAS .....	Exmouth .....	Deaths 40: double the amount of last quarter, and 12 or 14 above the average. Scarlet fever and measles prevailed, and were fatal; the former in 10 cases, the latter in 8.
.....	Heavitree, Devon .....	Deaths 26: the return is about the average. There are two cases of very malignant typhus, which occurred in a family very badly fed. The other members of the family had fever, but recovered. The disease did not spread. The district is healthy.
.....	Alphington .....	Deaths 12: being about the average. Small pox has prevailed in part of the district, and one death was registered. Measles prevails to some extent, but proved fatal in one case only.
PLYMOUTH .....	St. Andrew .....	Deaths 205: 69 more than the average of the 10 preceding summer quarters. The excess is produced by small pox, 24; diarrhoea, 22; fever, 21; bronchitis, 14; phthisis, 20; which numbers are above the mean from these causes, at this season of the year.
.....	Charles the Martyr .....	Deaths 93: being an excess of 35 over the corresponding period of 1847, and of 20 on the average of the last 5 summer quarters. Small pox has been very prevalent, no less than 18 cases having been registered, nearly all unvaccinated.
PENZANCE .....	Penzance .....	Deaths 164: which is considerably above the average, owing to the prevalence of dysentery; from which cause no less than 65 deaths have been registered during the quarter.
.....	Marazion .....	Deaths 31: somewhat above the average, several having occurred from epidemic dysentery, principally with the poor, arising from the dampness of the season, and an impoverished diet.
BATH .....	The Abbey .....	Deaths 72: the mortality is high for this quarter. In 1847 it was 60; in 1846 only 55; in 1845 it was 68. Still it does not arise from epidemics. Only 6 cases of affections of the digestive organs which could be considered epidemic, are registered. The fatal diseases are of a chronic character, and may yet, to some extent, be the effect of last winter's epidemic on impaired constitutions. The potatoes are much affected, and consequently dear, certainly three times the price they are in good years. Bread is, however, moderate.
BRISTOL .....	Castle Precincts .....	Deaths 99: being 14 less than in the corresponding quarter of 1847, and below the general average. The greatest mortality has been of children, from phthisis, pneumonia, croup, convulsions, 33 or a third of the total number of deaths having occurred at the average age of 2 years; 2 were from small-pox, not previously vaccinated, and 5 from scarlatina.
.....	St. Augustine .....	Deaths 60: much below the average. Fever prevalent, but fatal in 6 cases only. 6 deaths occurred from small pox, 3 without vaccination, and one where vaccination had been performed only 12 days before death.
.....	St. James .....	Deaths 110: Scarlatina has been very prevalent and fatal in this district during the last quarter.



SUP. REG. DISTRICT	REG. DISTRICT	
<b>BRISTOL</b> .....	<i>St. Mary Redcliff</i> .....	Deaths 89: being about the average. Several cases of small pox occurred. Scarlatina has prevailed during the last month; the district otherwise healthy.
.....	<i>St. Paul</i> .....	Deaths 110: which is considerably above the average. Small pox, scarlatina, and hooping cough have been prevalent. 11 fatal cases of small pox have been registered during the quarter; 9 without vaccination, and 2 in which it had been performed. Of scarlatina 6 cases, and 5 of hooping cough.
<b>CLIFTON</b> .....	<i>St. Philip and Jacob</i> .....	Deaths 130: small pox and scarlatina prevalent.
.....	<i>Ashley</i> .....	Deaths 39: being about the usual number; 8 from scarlatina.
.....	<i>St. George</i> .....	Deaths 53: being an increase of 17 per cent. on the general quarterly average, and 47 per cent. above the corresponding quarter of last year. The mortality has been confined to young children. Scarlatina of a malignant character has prevailed. The deaths from this disease are 7, from typhus 3, from diarrhoea 2, and from small pox 4.
<b>STROUD</b> .....	<i>Stroud</i> .....	Deaths 60: influenza, scarlet fever, hooping cough, and measles have prevailed considerably, and still continue. Scarlet fever and hooping cough have increased the mortality.
.....	<i>Stonehouse</i> .....	Deaths 10: being above the average of the corresponding quarter since 1837. Typhus has been rather prevalent, though not fatal in more than three cases.
<b>SHREWSBURY</b> .....	<i>St. Mary</i> .....	Deaths 74: considerably under the average. Small pox has been prevalent, but only fatal in 2 cases, both without previous vaccination. District otherwise free from epidemic or contagious diseases.
<b>DUDLEY</b> .....	<i>Dudley</i> .....	Deaths 232: being very near the average; but 23 less than in the corresponding quarter of last year. 37 persons died of diarrhoea, 19 of fever, and 4 of small pox, (2 not vaccinated.)
<b>WALSALL</b> .....	<i>Darlaston</i> .....	Deaths 50: which is below the average number, and 23 less than in the corresponding quarter of last year. Bowel complaint has extensively prevailed; 8 deaths, of young children, occurred from diarrhoea. Several persons have been attacked with English cholera, but no case has proved fatal.
<b>WOLVERHAMPTON</b> and <b>SEISDON</b> .....	<i>Wolverhampton, Eastern</i> .....	Deaths 171: slightly below the quarterly average. There were 13 from typhus, 22 from diarrhoea, 1 from cholera, and 1 from small pox.
.....	<i>Bilston</i> .....	Deaths 97: are 96 less than in the corresponding quarter of 1847, and 75 less than in last; proving most satisfactorily the healthy condition of the district.
.....	<i>Willenhall</i> .....	Deaths 77: being above the average; 47 occurred under 2 years of age. Health is low and mortality high, in consequence of bad ventilation of dwellings.
<b>WOLSTANTON</b> and <b>BURSLEM</b> .....	<i>Tunstall</i> .....	Deaths 115: the mortality has been much lighter towards the end of the quarter. The district is now in a healthier state than for several quarters.
.....	<i>Burslem</i> .....	Deaths 78: 22 below the average of the last five corresponding quarters, 30 below that of last year, and 81 below the September quarter of 1846. Amongst the causes are 11 from diarrhoea, 1 from scarlatina, 3 from fever, 2 from measles, and 4 from small pox, (2 not vaccinated.)
<b>BIRMINGHAM</b> .....	<i>St. George</i> .....	Deaths 195: being 15 less than in the corresponding quarter of last year. 34 persons died from diarrhoea, 16 from scarlatina, and 2 from small pox, without previous vaccination. The district is generally healthy.
.....	<i>St. Philip's</i> .....	Deaths 79: exceeding the preceding quarter by 19; and one less than in the corresponding quarter of 1847. Diarrhoea very prevalent, particularly among children.
.....	<i>St. Martin</i> .....	Deaths 127: being 23 more than in the preceding quarter, but 13 less than in the corresponding quarter of last year. Diarrhoea has been prevalent, and proved fatal in 35 cases, principally amongst children; 12 persons have also died of fever.
.....	<i>St. Thomas</i> .....	Deaths 153: Diarrhoea has been very prevalent, 36 deaths having occurred from that cause.
.....	<i>Lady Wood</i> .....	Deaths 77: being 19 less than in the last, but 10 more than in the corresponding quarter of 1847; the number is below the average, and the district may be considered in a healthy state. The principal causes of death are, diarrhoea 13, fever 7, enteritis 5, and scarlatina 4.
<b>COVENTRY</b> .....	<i>The Holy Trinity</i> .....	Deaths 71: although the number of deaths is by no means above the average, diarrhoea has been unusually fatal, but (with one exception) exclusively amongst children under 3 years of age. Consumption, and fever of a malignant character have been the next most numerous certified causes of death.
<b>LEICESTER</b> .....	<i>East Leicester</i> .....	Deaths 224: being 21 above the same quarter of 1847. Small pox has appeared, and been fatal in 7 cases, in 6 of which vaccination had not been performed. The district may be considered healthy.
<b>LINCOLN</b> .....	<i>Home</i> .....	Deaths 123: being on the increase. Great mortality has been caused by scarlatina and typhus, amounting to 36 deaths.
.....	<i>South</i> .....	Deaths 51: typhus and diarrhoea are very prevalent; but of the former very few cases have proved fatal. The deaths are less than the average; until the last month, the district has been very healthy.
<b>NOTTINGHAM</b> .....	<i>St. Ann</i> .....	Deaths 86: a decrease of 37 compared with the corresponding quarter of 1846, and of 69 with the same quarter for 1847. The improvement may be attributed to the comparative cheapness of provisions, to the infrequency of fever consequent upon the diminution of Irish immigration, and the almost total absence of diarrhoea. The number of old persons carried off last year, was so vast, that fewer than the usual proportion of that class, survived to swell the returns of subsequent times.
<b>BASFORD</b> .....	<i>Arnold</i> .....	Deaths 44: out of this number, 15 children died from scarlatina, one from typhoid fever, and an adult from the latter epidemic, all of which cases have taken place in Arnold, which comprises about one-half the population of the whole district. Two-thirds of the 44 occurred under 11 years of age.
<b>DERBY</b> .....	<i>St. Alkmund</i> .....	Deaths 100: 2 less than in the corresponding quarter of last year, but 21 more than the average for 11 September quarters. 23 deaths have been caused by consumption and diseases of the lungs, and 12 by diarrhoea.
<b>STOCKPORT</b> .....	<i>Stockport Second</i> .....	Deaths 96: being above the average, owing to the prevalence of scarlatina and diarrhoea. Out of 96 deaths registered 57 occurred under the age of 5 years.



## SUP. REG. DISTRICT

## REG. DISTRICT

**STOCKPORT** ..... *Heaton Norris* ..... Deaths 144: being 18 per cent. above the yearly average, and 31 per cent. more than that of the September quarters for the last 5 years. Scarlatina, diarrhoea, and dysentery, being the prevailing epidemics, may account for the increase, but especially the first. The mortality of children is shown thus:—

1 Year and under	2 years	3 years	4 years	5 years	TOTAL
41	16	15	9	4	85

Of the 85, 59 were certified, 17 not certified, and 9 had no medical attendant.

..... *Cheadle* ..... Deaths 33: considerably above the average of corresponding quarters which is 19. Dysentery and diarrhoea have been very prevalent, and fatal in 5 cases, cholera in one, scarlatina in 7.

..... *Hazelgrove* ..... Deaths 33: which is above the average... 6 persons died of small-pox without being previously vaccinated. 18 of the above number were registered in September, 6 in August, and 9 in July.

**MACCLESFIELD** ..... *Sutton* ..... Death 45: much below the average, and 31 less than in last quarter. The district is still in a very healthy condition. Only 6 cases of diarrhoea have been registered. No epidemic prevalent at the present time.

..... *Bollington* ..... Deaths 61: being 18 less than in the previous quarter, yet rather above the general average. 29 were of children, only 2 out of the 29 being at 5 years. 38 of the deaths were certified, 14 not certified, 3 had no medical attendant.

**GREAT BOUGHTON** ... *Hawarden* ..... Deaths 23: scarlet fever has been prevalent during the last quarter, and 4 deaths from it have occurred.

..... *The Castle* ..... Deaths 141: the average of the corresponding quarters for the last 5 years is 97, showing an excess of 44, which is accounted for by scarlatina being very prevalent. The number of deaths from that disease is 45, (17 males, and 28 females,) under 11 years of age.

..... *Cathedral* ..... Deaths 142: scarlatina has been very prevalent throughout the quarter. 32 deaths are certified to have been caused by it, and 2 by English cholera.

**LIVERPOOL** ..... *St. Martin* ..... Deaths 482: being above the average. Scarlatina and diarrhoea have been the prevailing diseases.

..... *Great Howard Street* ..... Deaths 268: prevailing diseases, scarlatina and diarrhoea.

..... *Dale Street* ..... Deaths 309: shewing an increase over the previous quarter of 93, entirely owing to scarlatina amongst children.

..... *Saint Thomas* ..... Deaths 268: the prevailing fatal diseases have been scarlatina, which caused 73 deaths, (principally among children under 5 years of age,) typhus 18, and diarrhoea 34.

..... *Mount Pleasant* ..... Deaths 402: including 20 at the infirmary, and 172 at the workhouse. The deaths are 60 less than in the last quarter, and 554 less than in the corresponding quarter of last year. Scarlatina has been fatal in 44 cases amongst children. The district is very healthy.

..... *Islington* ..... Deaths 318: which is 206 less than in the corresponding quarter of 1847, and 177 less than in the same quarter of 1846. From scarlatina, were registered 52 deaths; from typhus, 15; from diarrhoea, 29; dysentery 9.

..... *St. George* ..... Deaths 142: prevailing diseases, scarlatina and diarrhoea.

**WEST DERBY** ..... *West Derby* ..... Deaths 201: this return shows an increase of 36 over the preceding quarter. Consumption, dysentery, scarlet and typhus fevers have been fatally prevalent. From scarlet fever were 55 deaths; from dysentery 25; and from typhus 12.

..... *Toxteth Park* ..... Deaths 412: shewing an increase of 63 compared with June quarter 1848. From typhus there were 3; from scarlatina 60; from diarrhoea 40; from dysentery 9; from English cholera 5; and from small pox, (vaccinated) 5; (not vaccinated) 4.

**BLACKBURN** ..... *Witton* ..... Deaths 20: measles has been very prevalent, but fatal only in two cases.

**PRESTON** ..... *Preston* ..... Deaths 310: this district has been almost free from epidemic disease. There were only 4 deaths from measles, 4 from scarlatina, 11 from typhus, and 30 from diarrhoea. There are 139 deaths less than in the corresponding quarter of last year, and 3 under the average for the 12 corresponding quarters.

..... *Walton-le-Dale* ..... Deaths 42: being 6 above the average of the September quarter. Measles and whooping cough have prevailed, but have only proved fatal in a few cases.

**BOLTON** ..... *Western* ..... Deaths 125: considerably below the average of the corresponding quarters in other years, although diarrhoea and scarlatina have been epidemic.

..... *Little Hulton* ..... Deaths 39: 9 more than the average. 13 children died of scarlatina.

**WIGAN** ..... *Wigan* ..... Deaths 244: showing a decrease of 38 on the corresponding quarter of last year, also a decrease of 70 on the corresponding quarter of the year 1846, and an increase of 26 over last quarter. From measles there were 16 deaths; from typhus 10; from English cholera 1; from diarrhoea 31. Children who died under 5 years of age, 161. cases without medical attendance 20. An association called "The Working Man's Association," has been formed in the town, and great exertion is being made by the members (which is composed of the mayor, town council, magistrates, ministers of all denominations, and other inhabitants,) in encouraging cleanliness, and instilling a right moral sentiment, which it is hoped will have a good effect, and tend to promote the health of the town.

**CHORLTON** ..... *Chorlton upon Medlock* .... Deaths 251: shew an increase of 61 over the last quarter, and are with the exception of 1846, beyond those of any corresponding period for the last 5 years. Amongst children the mortality has been unusually heavy. Up to 5 years of age no less than 152 died, whilst from 5 to 10 years of age there have been 21. From scarlatina, which is still very prevalent, there have been 33 deaths; from diarrhoea and dysentery, 65.



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**CHORLTON**..... *Hulme* ..... Deaths 438: they have exceeded those of any previous quarter, (in proportion to the population). In the corresponding quarter of the year 1846, there were 479 deaths, but at that period there was scarcely a house unoccupied in the township of Hulme, when at this time there are nearly 1000 houses without tenants. Mortality with children has been very great; 253 died not exceeding 3 years of age, and 29 from 3 to 5 years. Deaths from dysentery and diarrhoea were numerous, and amounted to 135. Scarlet fever has been of a malignant and relentless character, and fatal in 72 cases; this disease has deprived two families of all their children, four in each house, and other families have lost three. The district is in a very unhealthy state at this time—scarlet fever not diminished in extent or virulence, and dysentery accompanied with fever of a low character, extending more amongst the adult portion of the population. During the last week from the same house, I have registered the deaths of three robust children, aged 8, 6, and 4 years, which were in previous good health. Two were taken ill on the 24th ult., one died in 9½ hours, the other in 20 hours; the third was taken ill on the 28th ult., and died in 40 hours. Each case was certified “diarrhoea-collapse.” The district continues free from small pox.

..... *Stretford* ..... Deaths 54: the number would be below the average, but that 10 deaths have been registered from scarlet fever in the village of Chorlton in this district.

**MANCHESTER** ..... *Ancoats* ..... Deaths 441: exceeding last quarters' return by 23, but 167 less than in the corresponding quarter of last year, and 192 less than in that of 1846. Scarlatina has been, and continues prevalent, and it has proved fatal in 64 cases.

..... *St. George* ..... Deaths 241: being considerably below the average. This may be accounted for by the absence generally of epidemics, and the health of the district being good. Seldom has less sickness prevailed in the district than at present. 53 deaths only have been registered during the September month, (exclusive of coroners' cases.) The district has not been in so healthy a state since the year 1845, when in the September quarter of that year, 229 deaths were registered. In the September quarter of last year, deaths from diarrhoea were 84; fever 55; scarlatina 22. Deaths during the present quarter from diarrhoea 34; fever 5; scarlatina 15; and dysentery 9.

..... *Market Street* ..... Deaths 316. Excluding the public establishments, July gave 67 deaths; August 61, and September 64; total 192, an excess as compared with the last quarter of 50; but in the same quarter of 1847, there were registered 216 deaths. In work-house, New Bridge-street, were 77 deaths, the lowest number for many past quarters. The aggregate number of deaths registered in the September quarter of 1847 was 636, a number exceeding that of this return by 320. Judging from the medical certificates, the prevailing diseases are scarlatina, diarrhoea, with dysentery.

..... *London Road* ..... Deaths 325. This number is less than that of the corresponding period of 1846 by 63, of 1847 by 112. In 1846 diarrhoea was most extensively fatal, amounting to 40 per cent. In the present quarter diarrhoea, including dysentery and English cholera, is somewhat less than 28 per cent. In 1847, fever was fatal to the amount of 37 per cent., chiefly in the temporary wards, among persons brought from a distance. In this quarter it is little more than in that of 1846. The most fatal disease, in point of proportion, in comparison of this with corresponding quarters, is scarlet fever, which has been characterized by malignity and rapidity of termination. There have been 50 cases out of 325 deaths, rather less than 1-6th of the whole number. Of ovarian disease, several cases have occurred, but not in persons belonging to the district. They came from a distance for treatment, and as too generally happens in such cases, (even where operations are performed) without success. It may deserve notice, that one female died at the remarkable age of 112 years.

No of deaths in the September Quarter			12 principal causes of death.	Proportion per cent. of deaths, Sept. Quarter.		
1848	1847	1846	September Quarter.	1848	1847	1846
72	64	156	Diarrhoea .....	22.15	14.64	40.20
50	6	8	Scarlatina .....	5.38	1.37	2.06
27	165	31	Fever .....	8.31	37.75	8.00
18	26	22	Convulsions .....	5.54	5.95	5.67
17	20	15	Teething .....	5.23	4.53	4.38
17	27	26	Phthisis .....	5.23	6.18	6.70
16	14	20	Marasmus .....	4.92	3.20	5.15
15	7	..	Dysentery .....	4.61	1.60	..
11	8	15	Pneumonia .....	3.38	1.83	3.87
8	8	11	Infantile Debility .....	2.46	1.83	2.83
8	16	17	Senile Debility .....	2.46	3.66	4.37
3	..	..	English Cholera .....	0.92	..	..
262	361	321	Deaths from 12 causes .....	80.59	82.54	83.23
63	76	67	Deaths from all other causes ..	19.41	17.46	16.77
325	437	388	TOTAL .....	100.00	100.00	100.00

..... *Deansgate* ..... Deaths 293: being considerably above the average. The excess is due to the great number of children who have died from scarlet fever and diarrhoea. Both from personal observation and from the certificates of other medical men, I have satisfied myself that the mortality has not generally occurred during the early stages or actual progress of the fever, but has resulted from the dropsical effusion following it. This is in very many cases induced by the carelessness of the parents, or other attendants of the children of the poor, for before they are well recovered from the fever, they are allowed to run out of doors; and during the late wet weather, from constant exposure to the rain, inflammatory affections supervene, and cause effusion and death. There can be little doubt that scarlatina and other infectious diseases are rendered much more extensive by the utter want of ventilation in the dwellings of the poor. The atmosphere in their apartments is perfectly nauseating and all that the medical attendant can say to them is insufficient to induce them to leave open for a little while their doors and windows. When scarlet fever once gets into these small, crowded, ill-ventilated dwellings, it is almost sure to affect successively almost the whole of the occupants; and the poisoned air, nursed as though it were ambrosia, entails the disease on many who have the temerity to enter. My own pupil, by breathing such an atmosphere for a few minutes, at once caught the



SUP. REG. DISTRICT	REG. DISTRICT	
MANCHESTER .....	Deanagate (continued) ....	disease. The clergy might do much good by assisting medical men in exhorting the people to attend more to the ventilation of their dwellings, and to their personal cleanliness. The most unpleasant and indeed disgusting portion of a medical man's duties springs from the unnecessary filth with which he is brought into contact, and which a proper sense of decency on the part of the friends of, or attendants on, the sick would obviate. Of 293 deaths, 34 were from scarlet fever, 7 from measles, 5 from typhus, 84 from diarrhoea, none from small pox.
.....	Cheetham .....	Deaths 51: being about the average. Dysentery has been very prevalent during this quarter. 6 deaths have been registered from this cause, 4 from scarlet fever, and one from catarrh, with putrid sore throat.
SALFORD .....	Regent Road .....	Deaths 220: exceeding the general average by 38 per cent. Of children under 5 years of age, 146 died. Scarlatina has been very rife for several weeks.
.....	Greengate .....	Deaths 273: in July, 90; August, 90; Sept. 93. The prevailing diseases were diarrhoea in July and August; and scarlatina in September. The number of deaths this quarter is above the average, although less than in the corresponding quarters for 1846 and 1847.
ASHTON .....	Mottram .....	Deaths 51: which is above the average. Malignant scarlet fever has been prevalent in this district.
OLDHAM .....	Middleton .....	Deaths 27: the smallest number registered in any former quarter since that of September, 1840. The district is at present in a very healthy state, which may be reasonably accounted for by the exceedingly low price of provisions.
SHEFFIELD .....	South .....	Deaths 115: this number is more than the average, which may be accounted for by the prevalence of small pox and diarrhoea, which in my district (particularly small pox) are very much on the increase.
.....	North .....	Deaths 278: the present quarter exceeds the same period in 1847, by 42; and shows a decrease upon the June quarter of 1846, by 38. 31 persons died of measles, and 34 of diarrhoea; 6 of small pox.
.....	Brightside .....	Deaths 70: being above the average from the great number of deaths (46) of children of 5 years and under. Scarlatina and diarrhoea were fatal, each in 5 cases; measles in 4.
HUDDERSFIELD ....	Almondbury .....	Deaths 79: exceeding the corresponding quarter by 14. Measles is very prevalent and fatal.
.....	Honley .....	Deaths 51: rather more than the average. Measles, the prevalence of which has been the chief cause of the increase, was fatal in 15 cases.
.....	Meltham .....	Deaths 32: being rather above the average. 13 are from measles, which disease is epidemic in this district.
.....	Slaithwaite .....	Deaths 63: this is above the average. Scarlet fever has been very fatal this quarter.
BRADFORD .....	Drighlington .....	Deaths 26: being 5 above the corresponding quarter of 1847. Small-pox has prevailed rather fatally; 7 deaths having occurred from that cause.
.....	Pudsey .....	Deaths 69: being a little above the average. In July, there were 26; in August, 15; in September, 28. The district during the quarter has been free from all epidemics, and the mortality appears to have varied with the weather.
.....	Horton .....	Deaths 120: being about the quarterly average. There were one case of English and one of Asiatic cholera (the latter certified). There were 6 cases of diarrhoea and dysentery, (4 of which were children under 12 months,) and 4 of fever.
.....	Bowling .....	Deaths 49: being below the average, and little more than one half the usual number.
LEEDS .....	North .....	Deaths 299: being the same as in the corresponding quarter of last year; though on the increase compared with the quarter ending 30th June. 9 were from scarlatina, 26 from diarrhoea, 20 from dysentery, one from English cholera, 23 from typhus, and 4 from small pox (without previous vaccination).
.....	West .....	Deaths 210: being below the average. Diarrhoea and dysentery prevail to some extent in this district; 13 cases of the former and 13 of the latter have been registered. 9 cases of small pox have been fatal, in 8 of which the patients had not been vaccinated; the 9th was vaccinated 3 times, but unsuccessfully.
.....	South East .....	Deaths 199: shewing an increase of 9 on those of last quarter. Diarrhoea and dysentery have been very prevalent and fatal. The number of deaths registered of each was, diarrhoea 38, dysentery 12.
HUNSLET .....	Kirkstall .....	Deaths 98: about the average, though there had been 13 deaths from scarlatina in Bramley Township, and one in Horsforth Township.
KINGSTON-UPON- HULL .....	Myton .....	Deaths 218: showing a decrease of 43 upon the corresponding quarter of last year. There have been 112 deaths of children under 5 years, 88 of whom had not completed their first year. In this respect there is an increase of 29 over last quarter, but a decrease of 20 as compared with the corresponding quarter of last year. There have been of zymotic diseases 61 cases, of which 39 were diarrhoea; 4 cholera; 4 remittent fever; 3 typhus fever; 3 measles. Among the 20 cases of convulsions, it is worthy of note that 17 were among children under one year old, and in 14 there was no medical attendant.
TYNEMOUTH .....	Wallsend .....	Deaths 32: being 17 above the corresponding quarter of last year. They have principally been with very old persons, and young children; 17 of the latter died under 18 months. No epidemic prevails.
NEWCASTLE-UPON- TYNE .....	Byker .....	Deaths 67: notwithstanding the absence of epidemics, this number is considerably more than the average for the corresponding quarter of the last 6 years. The number in the same period of 1846, however, when scarlatina prevailed, was 112.
WREXHAM .....	Malpas .....	Deaths 40: being 13 more than in the corresponding quarter of last year. Scarlatina has been prevalent in some parts of the district; and 9 cases have proved fatal.
.....	Wrexham .....	Deaths 104: being 18 less than in the preceding quarter. Small pox and scarlatina continue to prevail in the district; 5 persons died of small pox; 14 of scarlatina; 4 of fever; one of typhus; and 3 of erysipelas.
HOLYWELL .....	Mold .....	Deaths 48; being a little above the average of the last 11 years. Scarlatina has been very prevalent in some parts of the district; and fatal in 21 cases during the quarter.



QUARTERLY METEOROLOGICAL TABLE,

Compiled from the Weekly Tables furnished to the Registrar General by the Astronomer Royal.

Deaths registered in London from Small Pox, Measles, Scarlatina, Hooping Cough, Typhus, Diphtheria, Erysipelas, Cholera, Consumption, and other diseases of the Lungs: the numbers at each age,\* and the total deaths † (except violent and sudden) in each of the 13 weeks ending September 30th, 1848.

1848  Week ending	Places of the Moon	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. 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Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean reading of the Barometer, from 42 observations weekly, corrected and reduced to 32 deg. Fahrenheit	Inches	THERMOMETERS										Mean
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† The values for the last 3 weeks have been inferred from the lowest readings during these 3 weeks.

\* Sum of movement, 2 days in early week.

† Mean weekly, deduced from 74 days.

\* The ages of 50 were not specified in the Table  
† Deaths enumerated under the heads "violent," and "sudden," chiefly consist of cases of violence, and of sudden death, and are therefore excluded from this comparison of weeks.



## REMARKS ON THE WEATHER DURING THE QUARTER ENDING SEPTEMBER 30, 1848.

*By James Glaisher, Esq., of the Royal Observatory, Greenwich.*

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With the exception of a few days in July, and the period between the 9th and 23d of September, the weather during the Quarter ending September 30, 1848, was wet, with very little sunshine. The month of August was extremely wet, and in many places the falls of rain, both in July and September, were unusually great. So much rain falling in a period immediately following the previous bad weather, renders the season and the year very remarkable. On July 1, the mean temperature of the Air was  $8^{\circ}4$  below the average value of the same day in the seven preceding years, and on the 6th it was  $12^{\circ}2$  in excess above the average; on the former day the mean temperature was  $46^{\circ}7$ , and on the latter day it was  $74^{\circ}0$ . On the 9th, it was  $3^{\circ}$  below the average, and on the 14th it was  $9^{\circ}4$  above the average; and on the 15th it was again below the average. These changes were great and abrupt. From July 11 to September 19 the temperature of the Air was almost always below the average value, and particularly so between the 11th and 15th of September; on the 12th, the departure from the average was  $12^{\circ}6$ . From the 20th of September to the end of the Quarter the temperature of the Air ranged somewhat above the average value. The hottest day in this year was July 6, and this day was the hottest all over the country. On an average of seven years, the hottest day is July 5.

In pursuance of the arrangement hitherto followed, I will speak of each subject of investigation separately.

*The Mean Temperature of the Air at Greenwich*

For the month of July was  $61^{\circ}5$ , which is  $3^{\circ}7$ ,  $1^{\circ}3$ ,  $0^{\circ}6$ ,  $0^{\circ}1$ , and  $1^{\circ}7$  above those of the years 1841 to 1845 respectively,  $3^{\circ}0$  and  $3^{\circ}9$  below those of the years 1846 and 1847; or it is  $0^{\circ}1$  above the average of these seven years.

For the month of August was  $58^{\circ}5$ , which is  $2^{\circ}0$ ,  $6^{\circ}9$ ,  $3^{\circ}6$ ,  $4^{\circ}7$ , and  $3^{\circ}6$  below those of the years 1841, 1842, 1843, 1846; and 1847 respectively,  $0^{\circ}8$  and  $1^{\circ}2$  above those of the years 1844 and 1845 respectively, or it is  $2^{\circ}7$  below the average of these seven years.

For the month of September was  $55^{\circ}8$ , which is  $2^{\circ}3$ ,  $0^{\circ}6$ ,  $3^{\circ}7$ ,  $1^{\circ}1$ , and  $4^{\circ}3$  below those of the years 1841, 1842, 1843, 1844, and 1847 respectively,  $1^{\circ}2$  and  $1^{\circ}5$  above those of the years 1845 and 1846 respectively, or it is  $1^{\circ}2$  below the average of these seven years.

The mean value for the Quarter was  $58^{\circ}6$ ; that for 1841 was  $58^{\circ}8$ ; for 1842 was  $60^{\circ}7$ ; for 1843 was  $60^{\circ}8$ ; for 1844 was  $58^{\circ}7$ ; for 1845 was  $56^{\circ}9$ ; for 1846 was  $62^{\circ}6$ ; and for 1847 was  $60^{\circ}3$ ; so that the defect for this Quarter below the corresponding Quarter in the years 1841, 1842, 1843, 1844, 1846, and 1847 was  $0^{\circ}2$ ,  $2^{\circ}1$ ,  $2^{\circ}2$ ,  $0^{\circ}1$ ,  $4^{\circ}0$ , and  $1^{\circ}7$  respectively; the only year between 1841 and 1847, whose mean temperature for this period was less than that for the present year, was 1845; and the difference is  $1^{\circ}7$ . The average value for this Quarter from the seven preceding years was  $59^{\circ}8$ , so that the mean temperature of the air for the Quarter ending September 30, 1848, was below that of the corresponding Quarter in the preceding seven years by  $1^{\circ}2$ .

*The Mean Temperature of Evaporation at Greenwich*

For the month of July was  $57^{\circ}6$ , which is  $0^{\circ}1$  above that for the preceding seven years.

For the month of August was  $55^{\circ}2$ , which is  $2^{\circ}9$  below that for the preceding seven years.

For the month of September was  $53^{\circ}2$ , which is  $1^{\circ}5$  below that for the preceding seven years.

The mean value for the Quarter was  $55^{\circ}3$ , which is  $1^{\circ}4$  below the average for the seven preceding years.

*The Mean Temperature of the Dew Point at Greenwich*

For the month of April was  $54^{\circ}6$ , which is  $3^{\circ}0$ ,  $1^{\circ}4$ ,  $0^{\circ}2$ ,  $1^{\circ}9$ , and  $1^{\circ}8$  below those for the years 1841, 1842, 1845, 1846, and 1847 respectively;  $1^{\circ}7$  and  $0^{\circ}1$  above those for the years 1843 and 1844 respectively, or it is  $0^{\circ}9$  above the average of these seven years.

For the month of August was  $52^{\circ}8$ , which is  $2^{\circ}2$ ,  $6^{\circ}1$ ,  $5^{\circ}0$ ,  $4^{\circ}7$ , and  $3^{\circ}3$  below those for the years 1841, 1842, 1843, 1846, and 1847 respectively,  $0^{\circ}5$  and  $0^{\circ}2$  above those for the years 1844 and 1845, or it is  $2^{\circ}9$  below the average for these seven years.



For the month of September was  $50^{\circ}9$ , which is  $2^{\circ}8$ ,  $2^{\circ}6$ ,  $4^{\circ}0$ ,  $2^{\circ}3$ , and  $4^{\circ}0$  below those for the years 1841, 1842, 1843, 1844, and 1846 respectively,  $1^{\circ}2$  above those of the years 1845 and 1847, or it is  $1^{\circ}9$  below the average of these seven years.

The mean value for the Quarter was  $52^{\circ}8$ , which is  $1^{\circ}3$  below the average for the corresponding period of the preceding seven years.

The mean weight of water in a cubic foot of Air for the Quarter was 4.5 grains, which is 0.2 less than the average for the seven preceding years.

The additional weight of water required to saturate a cubic foot of air was 1.1 grain. The average value for the seven preceding years was 1.0 grain.

The mean degree of humidity of the atmosphere for July was 0.762, for August was 0.797, and for September was 0.795. The averages for the seven preceding years were 0.780, 0.804, and 0.842 respectively. The value for the Quarter was 0.785, which is 0.024 less than the average for these years.

The mean elastic force of vapour for the Quarter was 0.411 inch, which is 0.026 less than the average for these years.

The mean reading of the Barometer at Greenwich for July was 29.836 inches, for August was 29.732 inches, and for September was 29.832 inches; these values are 0.041 inch above, 0.065 inch below, and 0.021 inch above, respectively, the averages for the seven preceding years. The mean value for the Quarter was 29.797 inches, which is of the same value as the average for the seven preceding years.

The average weight of a cubic foot of Air under the average temperature, humidity, and pressure, was 527 grains; the average for the seven preceding years was 526 grains.

The Rain fallen at Greenwich in July was 2.1 inches, in August was 4.6 inches, and in September was 2.4 inches. The average amount for the seven preceding years was 2.3 inches in July, 2.7 inches in August, and 2.2 inches in September. The amount fallen in the Quarter was 9.1 inches, which is 1.9 inches greater than the average for the seven preceding years. The average fall of rain during this Quarter, as derived from the observations since the year 1815, is seven inches. In the year 1824 the fall of rain in the Quarter ending September 30 was 9 inches; in 1828 it was 12.5 inches; in 1829 it was 11 inches; and in 1839 it was 10.5 inches. The total amount of rain fallen this year till September 30 was 24.3 inches; in 1841 it was 21.2 inches; in 1842 it was 14.2 inches; in 1843 it was 17.5 inches; in 1844 it was 16.2 inches; in 1845 it was 16.6 inches; in 1846 it was 17.5 inches; and in 1847 it was 11.6 inches; so that the fall of rain this year exceeds that in 1841 by 2.7 inches, in 1842 by 9.7 inches, in 1843 by 6.4 inches, in 1844 by 7.7 inches, in 1845 by 7.3 inches, in 1846 by 6.4 inches, and in 1847 by 12.3 inches. The excess of the fall of rain this year over the average for the seven preceding years is 7.5 inches.

In the years 1824 and 1828 the depth of rain fallen to the end of September exceeded 23 inches; and in the years 1829 and 1839, the amount collected exceeded 20 inches. So large a fall as 24.3 inches within the first nine months of the year has probably not been exceeded within this century.

The temperature of the water of the Thames was  $63^{\circ}0$  by day, and  $62^{\circ}$  by night. The water, on an average, was  $3^{\circ}9$  warmer than the air.

The horizontal movement of the Air was about 130 miles daily; during the period of time between July 19 and July 27, it amounted to 233 miles per day; from July 31 to August 6, its average daily value was 240 miles, and on August 21 it exceeded 300 miles.

The highest and lowest readings of the Thermometer in Air, at the height of four feet above the ground, and protected as much as possible from the effects of radiation and rain, were  $85^{\circ}3$  and  $32^{\circ}8$ .

The average daily ranges of the Readings of the Thermometer in Air, at the height of four feet, were  $22^{\circ}5$  in July,  $18^{\circ}5$  in August, and  $20^{\circ}9$  in September. The average ranges for these months, from the observations of the seven preceding years, were  $17^{\circ}2$ ,  $17^{\circ}1$ , and  $16^{\circ}2$  respectively.

In July, the Readings of the Thermometer on grass were  $29^{\circ}5$  on one night, between  $32^{\circ}$  and  $40^{\circ}$  on 9 nights, between  $40^{\circ}$  and  $50^{\circ}$  on 12 nights, and above  $50^{\circ}$  on 9 nights. In August the lowest reading was  $36^{\circ}$ ; and the readings were below  $40^{\circ}$  on 4 nights, between  $40^{\circ}$  and  $50^{\circ}$  on 18 nights, and above  $50^{\circ}$  on 9 nights. In September, the readings were below  $32^{\circ}$  on 9 nights, and the lowest was  $23^{\circ}$ ; they were between  $32^{\circ}$  and  $40^{\circ}$  on 7 nights, between  $40^{\circ}$  and  $50^{\circ}$  on 9 nights, and above  $50^{\circ}$  on 4 nights.

The observer, at Uckfield, says—"That there was a severe white frost on the morning of August 10, with ice on the brooks and low grounds.

The mean amount of cloud for July was 6.6, for August was 7.6, and for September was 5.6. The average values for the seven preceding years were 6.7, 6.3, and 6.0 respectively.



There were five exhibitions of the *Aurora Borealis* during the Quarter, which occurred on July 11, August 28, September 4, 8, and 18.

*Thunder Storms* at different parts of the country occurred on July 14, 26, August 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 22, 23, 31, and September 5; and lightning, unaccompanied by thunder, was seen on July 24, August 23, 24, 25, September 22 and 25. The storms of July 14 were observed at Greenwich, Latimer Rectory, Cardington, Saffron Walden, and Leicester. At Greenwich, thunder clouds were observed first in the W. and N.W., at 8<sup>h</sup>. 30<sup>m</sup>. P.M., and from this time till near midnight the thunder followed the lightning at intervals varying from 5<sup>s</sup>. to 40, and lightning was visible during the whole of the night. At Latimer the storm is described as awful, and of five hours' duration. On July 24 lightning was seen at Saffron Walden; on July 26 there was a thunder storm at Leicester; on August 1, thunder was heard at Greenwich during the afternoon; on August 3 and 4, at Saffron Walden; on August 5, there were thunder storms at Greenwich, Stone, Saffron Walden, Leicester, and Empingham—near the last-mentioned place a tree was struck by the lightning. On August 6 and 7 there were thunder storms at Leicester; on August 8, at Leicester and at Exeter; on August 9, at Greenwich, but no lightning was seen; on August 10 at Stone; on August 11 at Greenwich, between the hours of 6 P.M. and 8 P.M., the storm began in the E., and many of the flashes of lightning were vivid and preceded the thunder by two or three seconds only; on August 22 there were storms at Exeter, Hastings, Stone, Saffron Walden, Cardington, and at Leicester. At Greenwich, on August 23 and 24, between the hours of 8 P.M. and midnight, on both days, many flashes of lightning were seen. On August 31, at Greenwich and at Stone, there were thunder storms; at the former place the thunder followed the lightning at intervals varying from 1<sup>s</sup>. to 12<sup>s</sup>. On September 5, there were storms at Greenwich, Stone, and Leicester. On September 22 lightning was seen at Greenwich and at Stone, and again at Stone on the 25th.

*Hail* fell at Stone and Cardington on August 22, and at Empingham on August 5; the hailstones at Cardington were of very large dimensions.

*Gales of Wind* took place all over the country on August 20, 21, and 22, but more particularly on the 21st; at many places trees were blown down and a great deal of injury was done; coasting vessels and fishing boats generally suffered very much.

*Large and continuous falls of Rain.*—In July, at Greenwich, rain fell to the depth of 0.3 inch on the 15th, 23d, and 31st. On the 14th, at Latimer Rectory, rain to the depth of half an inch fell in half an hour. In August rain was falling more or less at every part of the country on every day. At Greenwich, the amount collected exceeded 0.3 inch on the 1st, 3d, 8th, 10th, and 21st; and the falls exceeded 0.7 inch on the 14th and 31st. On the 14th a large fall occurred at all places. In September, on the 24th at Thwaite, between 4<sup>h</sup>. A.M. and 9<sup>h</sup>. A.M., rain fell to the depth of 2.12 inches, a greater fall within the same interval of time than as occurred at Thwaite within the preceding 40 years; and on this day at Leeds, the fall within nine hours was 2 inches. On the 28th, 29th, and 30th days, rain was falling almost continuously over all parts of the country. At Cardington the fall within 60 hours was 2.6 inches. At Leicester, the amount within 72 hours was 2.25 inches, and this was the amount which fell on these days at most places. This fall, extending over so large a portion of the country, is most unusual.

The approximate mean monthly values of the several subjects of research are shown in the subjoined tables; but, as they have not been corrected for diurnal variation corresponding to the time or times at which the observations have been made, the values generally are not in a state for comparison with each other. This remark does not apply to the approximate mean monthly temperatures of the air, because the same correction is applicable at all places.

The mean monthly temperatures of the places in Cornwall and Devonshire, in these three months, are about the same values as those of other places, but the extremes of daily and monthly temperatures are much less than elsewhere.

The Reading of the Barometer was low at the beginning of July, being 29.403 inches at 6<sup>h</sup>. A.M. on the 1st; this reading increased to 29.740 by 6<sup>h</sup>. P.M. on the 2nd, decreased to 29.611 on the 3d, and increased quickly on the 4th, and reached 30 inches before midnight on this day. The reading ranged above 30 inches on the 5th, and decreased to 29.635 by midnight on the 9th. During the 10th, the value increased 0.539 inch, having passed the point 30 inches, at about 1<sup>h</sup>. P.M. on this day. The reading continued above 30 inches till the 17th, the highest value was 30.344 on the 12th. From the 17th there was a gradual decrease to 29.146 on the 20th, at 3<sup>h</sup>. P.M.; at midnight on this day the reading was 29.467, and increased to 29.781 on the 24th; during the 25th the decrease was 0.3 inch; the reading at midnight was 29.480; it then gradually increased to 30 inches by the 29th. On the 30th the change was considerable, amounting to nearly half an inch



during the day, and at the end of the month the reading was 29.313 inches and still decreasing. On August 1, at 6<sup>h</sup>. A.M. the reading was 29.244 inches; after this time it turned to increase, and was 29.581 at midnight, and reached 29.817 on the 2nd day. On the 3d it decreased, and was 29.582 at midnight; during the 4th the changes were small; on the 5th the decrease was 0.190 inch, and the reading at midnight was 29.335 inches. During the 6th and 7th there was a slight increase; from this time to the 20th the changes were small, and at midnight on the 20th the reading was 29.846 inches. The decrease on the 21st was 0.334 inch, and at noon on the 22nd the reading was 29.423 inches, when it turned to increase and was 29.528 at midnight; the increase continued till the 25th at 0<sup>h</sup>., the reading at this time being 29.947, when it turned to decrease, and the changes after this time to the end of the month were small. In September, till the 4th the reading was above 30 inches; during the 5th, it decreased 0.2 inch, and was 29.638 at midnight; from the 6th to the 9th the changes were small: on the 10th, by 6<sup>h</sup>. P.M., the reading decreased 0.219 inch, and the reading was 29.496 inches, it then turned to increase quickly; on the 11th the reading at midnight was 30.091 inches. From this time till the 18th the reading was always above 30 inches, the highest value was 30.345 on the 16th; on the 19th it began to decrease, and on the 24th the reading was 29.223 inches, and from this time to the end of the month the changes were small, and chiefly about the mean reading of 29.6 inches.

*The reading of the Barometer at Stone*, till the 20th, was not very fluctuating. On July 21st, at 9<sup>h</sup>. A.M., the reading was 29.424 inches; it gradually increased till the 24th, and was 29.681 inches at 9<sup>h</sup>. P.M., it then turned to decrease; the reading on the 25th at 9<sup>h</sup>. A.M. was 29.476. On the 26th, at 9<sup>h</sup>. P.M., it was 29.459, and then turned to increase till the 28th at 9<sup>h</sup>. P.M., when its reading was 29.880. On the 30th, at 9<sup>h</sup>. A.M., the reading was 29.730, and at 9<sup>h</sup>. P.M., on the same day, it was 29.247 inches. On August 1, the reading was 29.133 at 9<sup>h</sup>. A.M.; this value increased to 29.732 inches by August 2 at 9<sup>h</sup>. P.M., it then turned to decrease and was 29.200 on the 5th at 9<sup>h</sup>. P.M.; from this time till the end of the month the changes were small. On September 1st, at 9<sup>h</sup>. A.M., the reading was 29.968 inches; on the 3d, at 9<sup>h</sup>. A.M., it was 30.156; on the 5th, at 9<sup>h</sup>. A.M., it was 29.558; on the 7th, at 9<sup>h</sup>. A.M., 29.840; on the 10th, at 3<sup>h</sup>. P.M., it was 29.408; on the 16th, at 9<sup>h</sup>. A.M., it was 30.210; on the 20th, at 9<sup>h</sup>. A.M., it was 29.490; on the 21st, at 9<sup>h</sup>. A.M., it was 29.588; on the 24th, at 3<sup>h</sup>. P.M., it was 29.100; on the 27th, at 9<sup>h</sup>. A.M., it was 29.482, and the changes after this time were small.

The great prevalence of rain during the Quarter, together with the very short periods of sunshine, has harassed the farmer in gathering in the crops. The month of July was about its usual character, but the constant rain in August impeded the farmer in his operations, and in many of the southern counties injured the crops considerably, causing the corn to sprout, and seed leaves to appear of fully an inch in length by the middle of August; the greater coldness of the northern counties prevented the sprouting of the corn, but it otherwise was seriously injured. Between the 9th and the 23d of September the weather was generally fine, and this period was the only good interval of time for harvest work during the Quarter, and the wheat gathered within this time was in good condition. The heavy falls of rain at the end of this month flooded many parts of the country, and the roads in some places were deeply trenched.

The observer, at Whitehaven, says—"The harvest in this neighbourhood was completed by September 20, somewhat earlier than usual; the crops were abundant and secured in excellent condition."

The observer, at Leeds, says—"The harvest has been most protracted, and there is yet much both of barley and oats out in the fields, which I fear is seriously injured. There is in fact much more corn out in the northern districts than is generally supposed. On September 25, I observed in the East Riding of Yorkshire hundreds of acres of corn and potatoes, with water to the depth of a foot upon them. The wheat and barley, which were housed between the 9th and the 23d of September, was without damage and in good condition; that which was housed before this time was in a bad state from not being dry. Wheat in this neighbourhood has not sprouted generally. Wheat and barley yield badly, and both crops are under an average. Both oats and beans are average crops. Potatoes are getting worse, the winter or late varieties of this vegetable are now attacked and rotting very fast; *wherever the tops have been very luxuriant they are the worst*. I have observed that the disease, which I have no doubt is attributable to meteorological causes, seems to have been immediately preceded by a white frost."

Sheep stock has not been healthy; the deaths among the lambs have been very numerous even in the driest districts.

Samuel Charles Whitbread, Esq., says—"My harvest began on the 28th of July; it continued 42 days, and rain fell on 28 of these days, depositing 4.75 inches of water; on the whole the crops suffered no damage." This remark has reference to the crops in Bedfordshire.



The observer, at Stone, says—"Speaking of the crops in the Vale of Aylesbury, those of hay and clover were abundant and good, but were not well gathered; wheat was below an average of many years, but was well housed; both barley and oats were average crops, and they were well housed." The observer speaks of the potato crop as being generally bad.

The observer at Southampton has kindly procured me an Agricultural Report from John Lark, Esq., of Finsbury Farm, near Romsey, Hampshire, which I have condensed as follows:—

"The South Hampshire farmer has been subjected, during the past Quarter, to more trying dispensations of Providence than I have known within a period of 25 years' practice." This gentleman further observes, "that the almost constant wet weather has injured every kind of crop, and that but little has come to maturity. The occasional short periods of sunshine have frequently induced the hope that a season would come for haymaking and harvest work, but the expectation unfortunately has never been realised. A large quantity of hay has been consequently rendered useless, and turnips have been very much injured. The wide range of prices of new wheat affords the best evidence of the extent to which this crop has been harassed. On lands which have been well farmed and well drained, or on those which would readily part with an excess of moisture, the crops are an average (with the exception of potatoes, which are almost a failure). On heavy, cold soils the crops are below the average. In consequence of the exceeding wetness, cattle have done badly."

The recent heavy rains (now Oct. 6) excite fresh anxiety with respect to seed time. On wet lands a great deal is needed to be done to prepare them for sowing, which operation must be late, and, therefore, to a certain extent, more precarious than if performed under the more favourable circumstances of a good seed season.



MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING SEPTEMBER 30, 1848.

Compiled from Observations furnished by the Gentlemen whose names are mentioned in the first column, the Hygrometrical results having been deduced from Glaisher's Hygrometrical Tables.

Year	Months	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS										WIND	RAIN		Deductions relative to the Humidity of the Atmosphere					Daily Observations taken at		
							Dry Bulb	Wet Bulb	Temperature of the Dew Point	Self-registering						Amount which it fell		Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean additional weight of Vapour required to saturate a cubic foot of Air	Humidity	Mean quantity of Water in a vertical column of Atmosphere	Foot of Air	Height of the station above the Sea in feet			
										Mean of daily Observations	Deduced	Observed	Highest during the month	Lowest during the month	Mean of the high-est on each day											Approximate mean temp. of the month	Average daily range of the Thermometer readings
1848	July	50° 7'	5° 18' W.	29-890	0-468	29-322	63-0	59-5	56-7	76-1	48-0	68-5	54-0	61-0	14-5	28-0	1-7	3-4	5-2	1-2	0-809	6-5	524	106	9 A.M.		
	Aug.	...	...	29-789	0-447	29-342	61-4	58-0	55-3	72-9	41-0	64-6	52-2	58-4	12-4	25-0	1-5	5-5	26	5-0	1-1	0-817	6-2	524	...	3 P.M.	
	Sept.	...	...	29-846	0-416	29-430	60-0	56-2	53-2	72-9	41-0	65-1	51-1	58-1	14-0	31-0	1-2	4-8	14	2-7	4-7	0-796	5-7	527	...	9 P.M.	
	July	...	...	29-880	...	...	57-8	...	...	79-1	44-0	69-4	50-0	59-7	19-4	35-0	1-5	6-0	13	3-5	...	...	...	...	9 A.M.		
	Aug.	...	...	29-830	...	...	60-9	...	...	75-3	42-0	68-4	50-6	59-5	17-8	33-0	1-4	6-8	25	5-0	...	...	...	...	3 P.M.		
	Sept.	...	...	29-880	...	...	59-6	...	...	75-3	42-0	67-9	50-0	58-9	17-9	33-0	1-4	6-2	12	3-1	...	...	...	...	9 P.M.		
	July	50° 17'	5° 4' W.	30-045	...	...	...	...	...	72-0	49-0	66-1	54-9	60-5	11-2	23-0	1-0	6-2	14	3-1	...	...	...	...	9 A.M.		
	Aug.	...	...	29-940	...	...	...	...	...	66-0	50-0	64-1	54-2	59-1	9-9	16-0	1-0	6-8	20	5-5	...	...	...	...	3 P.M.		
	Sept.	...	...	29-961	...	...	...	...	...	68-0	42-0	62-8	51-4	57-1	11-4	26-0	0-5	5-8	11	3-9	...	...	...	...	9 P.M.		
	July	...	...	...	0-458	...	...	...	...	56-0	75-0	51-0	67-0	56-2	61-6	10-8	2-4	...	...	3-3	...	...	6-3	...	120	9 A.M.	
	Aug.	...	...	...	0-432	...	...	...	...	51-3	71-0	49-0	64-6	54-5	59-5	10-1	2-4	...	24	3-8	...	...	6-0	...	...	...	
	Sept.	...	...	...	0-407	...	...	...	...	52-5	67-0	46-0	63-0	52-7	57-8	10-3	1-9	...	10	3-3	...	...	5-6	...	...	...	
	July	50° 45'	3° 41' W.	29-955	0-490	29-465	63-8	60-8	57-9	80-7	47-3	69-9	52-9	61-4	17-0	33-4	1-5	4-2	15	1-9	5-5	1-2	0-810	6-8	524	140	9 A.M.
	Aug.	...	...	29-804	0-456	29-348	61-5	58-2	55-9	72-8	44-0	67-2	51-3	59-2	15-9	28-9	1-6	4-6	26	2-7	5-1	1-0	0-843	6-3	524	...	...
	Sept.	...	...	29-951	0-426	29-525	58-9	56-2	53-9	71-7	39-0	64-9	48-4	56-7	16-5	32-7	1-2	4-1	11	4-3	4-8	0-9	0-842	5-9	529	...	...
	July	50° 50'	0° 46' W.	30-030	...	...	...	...	...	78-0	40-0	67-5	51-6	59-5	15-9	38-0	...	...	...	3-2	...	...	...	...	...	9 A.M.	
	Aug.	...	...	29-903	...	...	...	...	...	68-0	43-0	64-2	50-1	57-2	14-1	25-0	...	...	4-8	...	...	...	...	...	...	9 P.M.	
	Sept.	...	...	29-698	...	...	...	...	...	70-0	39-0	63-4	48-5	55-9	14-9	31-0	...	...	...	2-2	...	...	...	...	...	...	
	July	50° 55'	1° 24' W.	29-947	0-487	29-460	64-1	60-4	57-9	85-0	41-0	73-0	53-4	63-2	19-6	44-0	1-0	6-0	15	2-8	5-4	1-3	0-813	6-7	525	55	9 A.M.
	Aug.	...	...	29-880	0-466	29-414	60-8	58-3	56-5	73-0	43-0	68-8	51-9	60-3	16-9	32-0	1-0	7-0	23	5-1	5-2	0-8	0-868	6-4	524	...	3 P.M.
	Sept.	...	...	29-921	0-436	29-485	58-6	56-2	54-5	74-2	38-0	66-0	48-8	57-4	17-2	36-2	0-4	7-0	12	3-1	4-9	0-7	0-873	6-0	529	...	9 P.M.
	July	50° 59'	0° 5' E.	29-937	0-429	29-508	64-6	58-3	54-2	83-0	40-0	71-5	51-6	61-6	19-9	43-0	...	...	13	3-0	4-8	2-0	0-702	5-9	524	180	9 A.M.
	Aug.	...	...	29-826	0-425	29-401	60-6	56-8	53-8	72-0	39-0	66-5	49-6	58-1	16-9	33-0	...	...	23	6-1	4-8	1-2	0-796	5-9	526	...	9 P.M.
	Sept.	...	...	29-909	0-389	29-520	59-6	54-9	51-0	75-0	36-0	67-2	47-0	57-1	20-2	42-0	...	...	9	2-6	4-4	1-4	0-745	5-4	529	...	...
	July	51° 24'	2° 22' W.	29-760	0-445	29-315	62-5	58-1	55-2	88-0	43-0	71-5	51-4	61-7	20-2	45-0	1-2	5-9	17	3-9	5-0	1-3	0-798	6-1	523	265	9 A.M.
	Aug.	...	...	29-670	0-432	29-238	58-1	55-9	51-3	73-0	41-0	67-0	48-7	58-3	18-3	32-0	0-8	6-3	27	4-5	4-9	0-6	0-886	6-0	525	...	3 P.M.
	Sept.	...	...	29-790	0-387	29-403	56-4	53-8	51-4	75-0	35-0	65-0	45-3	55-2	19-7	40-0	0-5	5-2	15	4-3	4-4	0-8	0-844	5-3	530	...	9 P.M.
	July	51° 31'	0° 0'	29-836	0-437	29-399	62-3	57-6	54-6	85-3	42-8	73-7	51-2	62-5	22-5	42-5	...	6-6	18	2-0	4-8	1-5	0-762	6-0	524	159	Every 3h. except 3h. a.m. & 9h. p.m.
	Aug.	...	...	29-732	0-411	29-321	58-9	55-2	52-8	75-5	42-5	68-9	50-4	59-7	18-5	33-0	...	7-6	29	4-3	4-5	1-2	0-797	5-7	526	...	...
	Sept.	...	...	29-832	0-385	29-447	56-7	53-2	50-9	78-5	32-8	66-8	45-9	56-3	20-9	45-7	...	5-6	14	2-4	4-2	0-8	0-795	5-3	530	...	...

FOR REMARKS, SEE PAGE 22.

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## MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING SEPTEMBER 30, 1848.—(continued.)

Year		Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS				WIND	Amount of Clouds 0—10	RAIN		Deductions relative to the Humidity of the Atmosphere					Height of the Station above the Sea in feet	Daily Observations taken at																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
1848	Months						Dry Bulb	Wet Bulb	Temperature of the Dew Point	Self-registering				Average strength 0—6	General Direction	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean additional weight of Vapour required to saturate a cubic foot of Air			Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere	Weight of Air in a cubic foot of Air																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Mean of daily Observations	Mean of daily Observations	Deduced	Observed	Highest during the month	Lowest during the month	Mean of the high-est on each day	Mean of the lowest on each day	Approximate mean temp. of the month	Average daily range of the thermometer readings	Range of the Thermo-meter in the month																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Mr. William Ellis, LEWISHAM, James Glaisher, Esq. WALWORTH, W. H. White, Esq. 6, MARLBOROUGH PLACE, ST. JOHN'S WOOD, LONDON, George Leech, Esq. LATIMER RECTORY, near CHESHAM, BUCKS, Rev. Samuel King, F.R.A.S. AYLESBURY, Thomas Dell, Esq. STONE OBSERVATORY. M. Fossil, Assistant to Rev. J. B. Reade. HARTWELL, near AYLESBURY, Mr. Horton, Assistant to Dr. Lee. SAFFRON WALDEN, T. Spurgeon, Esq. POOL COTTAGE, HEREFORD. J. Pendergrass, Esq.	July	51° 31'	0° 0'	29.894	0.458	29.436	63.7	59.2	56.0	85.5	43.8	77.4	54.0	63.2	18.4	41.7	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°

FOR REMARKS, SEE PAGE 22.

MAIDENSTONE HILL,  
GREENWICH,

Mr. William Ellis,

LEWISHAM,  
James Glaisher, Esq.WALWORTH,  
W. H. White, Esq.6, MARLBOROUGH PLACE,  
ST. JOHN'S WOOD, LONDON,  
George Leech, Esq.LATIMER RECTORY, near  
CHESHAM, BUCKS.,  
Rev. Samuel King, F.R.A.S.AYLESBURY,  
Thomas Doll, Esq.STONE OBSERVATORY.  
M. Fissel, Assistant to Rev. J. B.  
Read.HARTWELL, near AYLESBURY,  
Mr. Horton, Assistant to Dr. Lee.SAFFRON WALDEN,  
T. Spurgeon, Esq.POOL COTTAGE, HEREFORD,  
J. Pentecost, Esq.



MONTHLY METEOROLOGICAL TABLE, FOR THE QUARTER ENDING SEPTEMBER 30, 1848.—(continued.)

Year		Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS										WIND		RAIN		Deductions relative to the Humidity of the Atmosphere					Daily Observations taken at			
1848	Months						Dry Bulb	Wet Bulb	Temperature of the Dew Point	Self-registering					Average strength 0-6	General Direction	Amount of Clouds 0-10	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Vapour required to saturate in a cubic foot of Air	Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere	Weight of a cubic foot of Air	Height of the station above the Sea in feet				
CARDINGTON, near BEDFORD, Mr. Maclaren, Gardener to S. C. Whitbread, Esq.	July	52-7	0-25 W.	29-870	0-480	29-396	67-1	61-1	57-4	85-0	39-0	715	50-5	61-0	21-0	39-0	...	...	6-4	16	1-9	5-3	2-0	0-728	6-6	520	70	9 A.M.	
	Aug.	...	...	29-750	0-445	29-305	62-5	58-4	55-2	74-0	39-0	676	48-2	57-9	19-4	39-0	...	...	6-5	25	3-7	5-0	1-3	0-798	6-1	524	...	2 P.M.	
	Sept.	...	...	29-880	0-425	29-455	60-1	56-6	53-8	79-0	31-0	647	44-6	54-6	20-1	31-0	...	...	5-3	10	4-3	4-8	1-1	0-816	5-9	527	...	...	
THWAITE, Orlando Whistecroft, Esq.	July	52-8	0-16 E.	...	...	...	...	...	...	87-0	46-0	...	...	...	...	41-0	0-6	...	...	...	10	1-9	...	...	...	...	200	...	...
	Aug.	...	...	...	...	...	...	...	...	74-0	43-0	...	...	...	...	31-0	0-6	...	...	...	19	3-5	...	...	...	...	...	...	...
	Sept.	...	...	...	...	...	...	...	...	81-0	38-0	...	...	...	...	13-0	0-3	Variable.	...	7	4-4	...	...	...	...	...	...	...	...
NORWICH. William Brooke, Esq.	July	52-37	1-16 E.	29-932	0-474	29-458	63-3	60-1	57-0	84-0	11-0	7-1	53-8	62-4	17-3	10-0	...	...	...	9	2-2	5-3	1-6	0-765	6-5	525	33	Every 3h. except midnight and 3h. A.M.	
	Aug.	...	...	29-810	0-424	29-386	60-7	56-6	53-8	75-0	42-0	64-6	49-8	58-2	16-8	33-0	...	...	...	21	3-3	4-8	1-1	0-792	5-1	526	...	...	
	Sept.	...	...	29-953	0-419	29-534	58-5	55-5	53-1	75-0	38-0	63-2	48-3	55-7	14-9	37-0	...	...	...	8	2-6	4-7	0-9	0-843	5-8	531	...	...	
LEICESTER. John Plant, Esq.	July	52-40	1-7 W.	29-823	0-367	29-456	62-2	51-9	49-5	85-0	39-0	71-1	52-1	62-2	24-0	56-0	1-1	...	...	5-5	2-8	4-1	2-2	0-655	5-1	524	150	9 A.M.	
	Aug.	...	...	29-681	0-371	29-310	59-1	51-0	49-8	78-0	39-0	63-1	46-2	57-1	21-9	39-0	3-0	...	...	5-9	2-3	4-3	4-2	1-5	0-733	5-1	525	...	...
	Sept.	...	...	29-823	0-362	29-461	55-2	51-9	49-1	83-0	35-0	65-2	45-2	56-1	20-0	48-0	2-0	Variable.	...	4-5	1-1	4-1	0-9	0-817	5-0	532	...	...	
EMPINGHAM, RUTLAND. William Fancourt, Esq.	July	52-41	0-43 W.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	2-3	...	...	...	...	...	...	...
	Aug.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25	3-2	...	...	...	...	...	...	...
	Sept.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	3-9	...	...	...	...	...	...	...
DERBY, Mr. J. Davis, Optician.	July	52-55	1-28 W.	29-710	0-471	29-269	67-1	60-7	56-9	81-0	40-0	69-3	52-1	60-7	17-2	41-0	...	...	...	...	14	3-1	5-2	2-1	0-716	6-5	517	...	3 P.M.
	Aug.	...	...	29-560	0-441	29-119	60-1	57-1	54-8	72-0	38-0	64-4	48-3	56-4	16-1	34-0	...	...	...	25	5-0	4-9	1-0	0-837	6-1	521	...	...	
	Sept.	...	...	29-720	0-407	29-313	60-8	56-2	52-5	72-0	35-0	62-5	46-0	54-3	16-5	37-0	...	...	...	13	3-7	4-6	1-4	0-766	5-6	524	...	...	
HIGHFIELD HOUSE, NOTTS, Edward Joseph Lowe, Esq., F.R.A.S.	July	52-57	1-10 W.	29-808	0-431	29-374	61-9	57-6	54-4	84-8	40-3	7-7	50-8	61-2	20-9	44-5	...	...	6-9	20	3-4	4-9	1-4	0-777	6-0	521	...	...	
	Aug.	...	...	29-701	0-397	29-304	57-5	51-4	51-8	74-7	37-2	67-5	47-9	57-7	19-6	37-5	...	...	6-3	25	4-8	4-5	0-9	0-821	5-5	528	...	Noon	
	Sept.	...	...	29-873	0-389	29-481	57-3	51-0	51-2	78-0	37-5	63-2	46-8	56-0	18-4	40-5	...	...	5-6	13	3-5	4-1	1-3	0-762	5-4	530	...	11 P.M.	
LIVERPOOL OBSERVATORY John Hartnup, Esq., F.R.A.S.	July	53-25	3-0 W.	29-638	0-428	29-210	64-3	58-1	54-0	76-8	48-9	67-0	56-3	61-7	10-7	27-9	1-0	...	...	7-0	15	2-5	4-8	2-0	0-708	5-9	519	...	h.m.
	Aug.	...	...	29-788	0-391	29-384	61-3	55-6	51-6	67-8	48-0	63-5	53-8	58-7	9-7	19-8	1-2	...	...	6-4	26	4-1	4-4	1-7	0-723	5-4	524	...	1-8 P.M.
	Sept.	...	...	29-945	0-396	29-549	60-4	55-3	51-7	72-2	45-2	63-7	52-5	57-6	10-2	27-0	0-5	N.W. & N.E.	6-7	13	2-3	4-4	1-5	0-747	5-5	528	...	...	
STOURTON LODGE, LEEDS, Charles Clarnock, Esq.	July	53-41	1-30 W.	29-702	0-415	29-257	62-7	58-4	55-2	84-0	37-0	68-2	49-0	58-6	19-2	47-0	1-5	...	...	5-8	20	4-9	5-0	1-3	0-798	6-1	519	...	9 A.M.
	Aug.	...	...	29-661	0-426	29-245	59-7	56-1	53-9	72-0	36-0	64-4	46-2	55-3	18-2	36-0	1-5	...	...	6-5	23	3-8	4-8	0-9	0-842	5-9	522	...	3 P.M.
	Sept.	...	...	29-860	0-398	29-462	57-6	54-8	51-9	74-0	35-0	62-3	46-5	54-4	15-8	39-0	1-4	N.E.	6-7	16	5-9	4-5	0-8	0-843	5-5	525	...	...	
WAKEFIELD PRISON, R. Milner, Esq.	July	53-41	1-30 W.	29-520	0-375	29-145	60-8	55-1	50-5	90-0	39-5	73-9	51-8	62-9	22-1	50-5	...	...	...	18	2-5	4-2	2-0	0-673	5-2	525	113	9 A.M.	
	Aug.	...	...	29-584	0-353	29-231	55-9	52-1	48-5	88-0	36-0	68-4	48-3	58-4	20-1	52-0	...	...	...	24	3-5	4-0	1-2	0-776	4-9	526	...	3 P.M.	
	Sept.	...	...	29-624	0-352	29-272	54-7	51-5	48-5	78-5	32-5	64-3	46-5	55-4	17-8	46-0	...	...	...	15	3-5	4-0	0-9	0-807	4-9	523	...	9 P.M.	

FOR REMARKS, SEE PAGE 22.

CARDINGTON, near BEDFORD,  
Mr. MacLaren, Gardener to S. C.  
Whitbread, Esq.

THWAITE.  
Orlando Whistcraft, Esq.

NORWICH.  
William Brooke, Esq.

LEICESTER.  
John Plant, Esq.

EMPINGHAM, RUTLAND.  
William Fancourt, Esq.

DERBY,  
Mr. J. Davis, Optician.

HIGHFIELD HOUSE, NOTTS.  
Edward Joseph Lowe, Esq., F.R.A.S.

LIVERPOOL OBSERVATORY  
John Hartnup, Esq., F.R.A.S.

STOURTON LODGE, LEEDS,  
Charles Clarnick, Esq.

WAKEFIELD PRISON,  
R. Milner, Esq.

MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING SEPTEMBER 30, 1848.—(continued.)

Year	Months	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS										Wind	Amount of Clouds 0-10	RAIN		Deductions relative to the humidity of the Atmosphere					Height of the station above the Sea in feet	Daily observations taken at	
							Dry Bulb Observations	Wet Bulb Observations	Mean of daily Observations	Deducted	Observed	Highest during the month	Lowest during the month	Mean of the high-est on each day	Mean of the lowest on each day	Approximate mean temp. of the month			Average daily range of the Thermo-meter readings	Range of the Thermo-meter in the month	Average strength 0-6	General Direction	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air			Mean additional weight of Vapour required to saturate a cubic foot of Air
1848	July	53° 51'	2° 8' W.	29.574	0.414	...	60.2	56.0	52.8	...	83.5	41.7	66.5	49.5	58.1	17.1	41.8	0.7	W. s. w., w.	7.7	19	4.6	4.7	0.787	5.8	522	9 a.m.	
	Aug.	...	...	29.498	0.377	...	56.1	52.7	50.0	...	68.9	37.0	62.5	46.8	54.7	15.7	31.9	1.0	s. w.	7.1	26	7.0	4.3	0.823	5.3	525	3 p.m.	
	Sept.	...	...	29.646	0.376	...	55.5	52.4	49.9	...	71.2	32.6	61.1	45.7	53.4	15.3	38.6	0.9	Variable.	7.4	17	3.6	4.3	0.838	5.3	529	9 p.m.	
YORK, John Ford, Esq.	July	53° 56'	1° 5' W.	29.861	...	...	62.7	59.7	57.6	...	84.0	40.0	68.5	53.2	60.8	15.3	44.0	...	W.	...	15	1.7	...	...	...	...	Not stated	
	Aug.	...	...	29.926	...	...	61.2	58.0	55.7	...	73.0	37.0	64.1	47.5	55.8	16.6	36.0	...	W. & s. e.	...	19	3.2	...	...	...	...	...	
	Sept.	...	...	30.015	...	...	58.5	56.0	53.7	...	75.0	35.0	61.3	46.1	53.9	15.7	40.0	...	s. e. s. w. & n. e.	...	11	4.1	...	...	...	...	...	
WHITEHAVEN. John Fletcher Miller, Esq.	July	54° 33'	3.25° W.	29.781	0.435	29.346	63.0	58.1	54.6	54.8	72.0	47.0	65.1	54.6	59.8	10.5	25.0	2.6	N. W.	...	18	3.6	4.9	1.6	0.753	6.0	522	11 A.M.
	Aug.	...	...	29.647	0.389	29.258	60.4	55.0	51.3	51.1	67.5	47.5	62.4	52.2	57.4	10.4	20.0	2.5	N. W.	...	19	5.1	4.4	1.1	0.797	5.4	525	3 P.M.
	Sept.	...	...	29.808	0.393	29.415	59.1	54.9	51.5	51.9	71.5	38.5	60.1	51.3	56.1	9.6	33.0	2.3	s. w.	...	13	2.3	4.4	1.5	0.751	5.4	526	10 P.M.
DURHAM, Rev. R. A. Thompson.	July	54° 46'	1° 34' W.	29.505	0.403	29.102	59.0	55.3	52.2	...	79.6	40.9	66.1	50.5	58.3	15.6	38.7	1.7	s. w.	5.7	12	1.8	4.5	1.2	0.797	5.6	521	9 A.M.
	Aug.	...	...	29.416	0.355	29.061	54.5	51.5	48.6	...	68.0	35.3	61.8	46.1	54.0	15.7	32.7	1.2	Variable	5.5	15	2.8	4.1	0.9	0.817	4.9	526	9 P.M.
	Sept.	...	...	29.580	0.355	29.225	53.1	50.8	48.6	...	72.3	34.8	60.1	46.4	53.2	13.7	37.5	1.1	s. w.	6.2	12	2.2	4.0	0.7	0.861	4.9	530	.....
NEWCASTLE-UPON-TYNE, G. Muras, Esq.	July	54° 43'	1° 37' W.	29.770	0.441	29.329	61.7	57.8	54.7	...	79.5	43.0	66.7	52.7	59.7	14.0	36.5	...	s. w.	...	7	2.7	4.9	1.3	0.796	6.1	524	9 A.M.
	Aug.	...	...	29.650	0.386	29.264	57.5	54.0	50.9	...	68.0	38.0	62.3	48.4	55.4	13.9	30.0	...	s. w.	...	14	3.1	4.4	1.1	0.803	5.3	526	3 P.M.
	Sept.	...	...	29.814	0.392	29.422	56.1	53.7	51.5	...	74.0	34.5	61.1	47.9	54.5	13.2	39.5	...	N. E.	...	10	2.1	4.4	1.1	0.859	5.4	530	9 P.M.

FOR REMARKS, SEE PAGE 22.

No additional information has been given respecting the barometers, and dry and wet bulb thermometers besides that given in the preceding Quarterly Reports.

The rain gauges at Helston, Torquay, Exeter, Maldenstone Hill, Carlington, Liverpool, and Stonyhurst, are cylinders with inverted funnels: at Southampton is a copper vessel from which the rain is measured by means of a graduated jar. At Walworth, Crossley's patent gauge. At Aylesbury the rain is collected in a cylinder by means of a funnel, and weighed. At Thwaite the gauge is of lead, 3 inches square. At Norwich a floating gauge is used, (if there be a staff connected with the float the results are erroneous). At Leicester the collecting vessel is 6 inches square. At Empingham the vessel is a long narrow cylinder, and at Greenwich, Crossley's patent gauge, a cylindrical gauge, as well as others at different heights are used.

The height of the receiving surfaces are at Helston, 4 ft. 9 in.; at Torquay, 3 ft. 6 in.; at Exeter, 3 ft.; at Southampton, 8 ft. 4 in.; at Maldenstone Hill, 1 ft.; at Aylesbury, 4 ft. 4 in.; at Stone, 4 ft. 6 in.; at Carlington, 3 ft. 6 in.; at Thwaite, 3 ft.; at Norwich, 31 ft., being placed on the top of the Literary Institution; at Leicester, 30 ft. Is this gauge placed on the roof of a building? At Empingham, 4 ft. 6 in.; at Highfield House, 23 ft.; at Leeds, 4 ft.; at Wakefield, 3 ft. 4 in.; at Stonyhurst, 1 ft. 2 in.; and at Newcastle, 8 in.

The distance of the gauges from trees or walls are 20 ft. at Helston; 40 ft. at Southampton; 10 ft. at Maldenstone Hill; 50 ft. at Aylesbury; 40 ft. at Walworth; 5 ft. at Stone; 50 ft. at Carlington; many feet at Thwaite; free from all obstructions at Norwich and at Leicester; 30 ft. at Liverpool; 60 ft. at Leeds; 170 ft. at Wakefield; and 60 ft. at Stonyhurst.

The reduction of the preceding results has been made as follows:—The first step was the application of corrections depending on the time or times of the day at which the observations have been made, to deduce the true monthly values for each element. (For these tables, see the Phil. Trans., part 1, for 1848). The next step was the taking the reduced monthly mean “elastic force of vapour” from the reduced “barometer readings.” The third step was the taking the mean of these reduced monthly values, and reducing that for the barometer to the level of the sea, diminishing that at Uckfield by 0.131 in.; and that at Beckington by 0.057 in.; increasing that at Walworth by 0.039 in.; and that at Derby by 0.193 in.; and in this way the following Quarterly Table was formed. The nature of these corrections will be explained at a future time.

ERRATA.—In the Quarterly Report ending June 30, 1848: Monthly Meteorological Table, Torquay, May, Deduced Dew Point, for 18° 9, read 49° 6. Mean of the lowest readings of the self-registering thermometer, for 49° 2, read 52° 9. Approximate mean temperature for 62° 4, read 58° 5. Average daily range, for 15° 9, read 12° 2. Chichester, May, barometer readings, for 29.092, read 30.092. Leicester, May, barometer readings, for 29.910, read 29.612. Quarterly Meteorological Table, Torquay, mean temperature, for 55° 1, read 55° 6. Mean daily range, for 12° 8, read 11° 0. Mean weight of vapour in a cubic foot of air, for 3.8, read 4.0; and for mean degree of humidity, for 0.767, read 0.800.

Glaisher's corrections to Meteorological Observations, Phil. Trans. part 1, 1848, Table IV., July, at 8h., 9h., 10h., and 11h., for — read +.



## GENERAL REMARKS.

AT HELSTON.—In the number of days on which rain fell, those distinguished by fog or mist are included.

AT FALMOUTH.—The observer was absent from home during the greater part of the month of July, and the observations were partially taken by a friend. The numbers in brackets have been inferred, and they have been used in subsequent calculations.

AT TRURO.—Rain fell on every day in August, excepting the 28th, 29th, and 30th.

AT EXETER.—On July 11 the potato disease first appeared. On July 14, the reading of the thermometer in air was 80°·7. Thunder storms took place on August 8 and September 22, and storms of wind occurred on August 20, 21, 22, and September 25.

AT UCKFIELD.—The amount of water evaporated in July was 4.3 inches, in August was 2.1 inches, and in September was 3.0 inches.

AT BECKINGTON.—To the end of September, in the year 1845, rain fell on 134 days, and the amount fallen was 29.94 inches: in 1846 it fell on 166 days, and the amount was 32.30 inches; in the year 1847 it fell on 151 days, and the amount was 28.74 inches; and in 1848 it fell on 163 days, and the amount was 31.43 inches.

AT GREENWICH.—The observations have been corrected for diurnal ranges. Meteors were numerous on the nights of July 29, August 9 and 10.

AT MAIDENSTONE HILL.—Solar halos were seen on July 7 and September 27. Lunar halos were seen in August 21, September 12 and 14. The lunar halo of September 12 was accompanied by an inverted arc, situated so as to be in contact with the highest part of the halo.

AT LEWISHAM.—The observations have been corrected for diurnal ranges.

AT WALWORTH.—The hottest day during this year was July 6. On August 14 rain was falling during 10 hours continuously, and on September 29 and 30 rain was falling during 30 hours incessantly.

AT ST. JOHN'S WOOD.—The highest reading of a thermometer, with its bulb placed in the full rays of the sun, was 105° in July, 94°·5 in August, and 103° in September; and the mean monthly values of the highest readings on every day were 86°·6, 82°, and 80°·9 respectively. The lowest reading of a thermometer placed on grass, with its bulb fully exposed to the sky, was 47°·5 in July, 35°·2 in August, and 28°·0 in September; and the mean monthly readings were 47°·5, 47°·1, and 43°·7 respectively. (It is evident that the lowest reading for July, viz. 47°·5, is wrong, as the mean reading for the month is of the same value).

AT LATIMER RECTORY.—An awful thunder storm, of nearly five hours' duration, on the evening of July 14; rain to the depth of half an inch fell in half an hour. September 8th, at 10h. p.m., there was a fine auroral arc of about 90° on the northern horizon. September 12, there was a finely coloured lunar halo.

AT STONE.—From July 1 to the 21st no observations were taken. Thunder was heard on August 5, 10, 22, 31, and September 5. Lightning was seen on August 24, September 5, 22, and 25. On August 21, a gale of wind from the S.W., the reading of the barometer had decreased 0.5 inch since the preceding day. On August 22, some hail fell during a thunder storm, and a rainbow with three supernumerary arches were seen. A white frost on August 30 and on August 31, and during the latter day rain was falling heavily over the Chiltern Hills, at the distance of 8 miles, S.E. Rain fell on every day during the month of August, except the 12th, 24th, and 30th. Lunar halos were seen on September 11, 12, and 14. A solar halo and remarkable effects of solar lights were observed September 12. (The reading of the barometer in August seems to be one-tenth of an inch too high; should it not be 29.461 inches? The readings of the maximum and minimum instruments seem to be all erroneous, the former being too low, and the latter too high. A duplicate series of readings was sent with another set of instruments, whose values were confirmatory of the numbers as printed; hence it would appear that the error arises from the position of the thermometers, and not from the instruments themselves.)

AT SAFFRON WALDEN.—Thunder was heard on July 14, August 3, 4, 5, and 22. Lightning was seen on July 14 and August 24. August 7th, 2h. a.m., seven shooting stars were seen passing from the zenith towards the north.

AT HEREFORD.—Evaporation in July was 3.1 inches, in August 3.4 inches, and in September 2.6 inches.

AT CARDINGTON.—Thunder storms on July 14 and August 22; during the former, the wind blew successively from all quarters, and during the latter hailstones fell of very large dimensions. August 21, a gale of wind of great violence was blowing from noon to 8h. p.m.; trees were blown down, and a great deal of injury was done. Rain was falling almost continuously from September 28 till October 1; the amount collected between these times was 2.61 inches.

AT THWAITE.—On September 24, between 4h. a.m. and 9h. a.m., rain fell to the depth of 2.12 inches, being the greatest fall within five hours that has taken place here for 40 years. On September 29, rain to the depth of 1.43 inches fell.

AT NORWICH.—The dry and wet bulb thermometers were not read from the 1st of July to the 17th. The amount of evaporation in August was 1.44 inches, and in September was 0.97 inch. On August 21, the wind blew a hurricane during the day and night.

AT LEICESTER.—Thunder storms occurred on July 14, 26, August 5, 6, 7, 8, 22, 30, and September 15. Lunar halos were seen on September 11 and 14. September 28, 29, and 30, rain was falling almost continuously, and the amount collected was 2.25 inches.

AT HIGHFIELD HOUSE.—Evaporation in July was 6.0 inches, in August was 4.2 inches, and in September was 3.5 inches. The maximum thermometer readings, with blackened bulb placed in the full rays of the sun, were 105° in July, 98°·5 in August, and 104° in September; and the mean values for these months were 86°·4, 86°·4, and 83°·5.

AT STOURTON LODGE.—With the exception of the interval of time between September 9 and September 23, rain was falling very frequently during the Quarter.

AT WAKEFIELD.—The numbers in columns 11 and 13, seem to be much too great, and consequently the numbers in columns 15, 16, and 17 are too large.

AT STONYHURST.—The readings of the barometer are all from 0.1 inch to 0.2 inch too high; these values have not been used in subsequent calculations. At the beginning of this Quarter, the instrument with which the previous observations had been made needed repair, and the observations during this Quarter have been made by an indifferent instrument. A new barometer, by Barrow, will replace this instrument almost immediately. The difference between the mean minimum readings of a thermometer placed on a metal plate on short grass, and that in air, was 3°·7 inches; and the difference between the mean readings of one placed on cotton wool, and that in the air, was 8°·0. Auroræ were seen on August 28 and September 18.

AT WHITEHAVEN.—Auroræ were seen on July 11, September 4 and 18. Hail fell on August 22. The thermometer in air, read 71°·5 on September 5, and 70°·5 on September 23. During the eclipse of the moon on September 13, the thermometer reading decreased to 47°, whilst at Lewisham its reading was 31°·9. The evaporating gauge is always so placed, except when rain is falling, that the surface of the water is fully exposed to the sky, and to the passing air. When rain is falling it is placed under a capacious shed, which is supported by iron pillars 12 feet in height, and just so far within the shed as not to be affected by driving rains. The diameter of the gauge is 8 inches, and the amount evaporated is read daily by means of a tube, graduated to show the thousandth of an inch.



## QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES	Mean pressure of the Atmosphere of Dry Air reduced to the level of the Sea	Mean temperature of the Air	Highest reading of the Thermometer	Lowest reading of the Thermometer	Mean daily Range of Temperature	Range of the Thermometer	WIND		Mean amount of Cloud 0—10	RAIN		Mean weight of Vapour in a cubic foot of Air	Mean additional weight required to saturate a cubic foot of Air	Mean degree of humidity	Mean whole amount of Water in a vertical column of Atmosphere	Mean weight of a cubic foot of Air.	Height of column of the Barometer above the level of the Sea.
							Mean estimated strength 0—6	General Direction		Number of days on which it fell	Amount collected						
Helston .....	29.535	58.5	76.0	41.0	15.0	35.0	1.5	S.W.	5.2	57	11.3	gr. 4.8	gr. 0.9	0.839	in. 5.9	grs. 527	feet 106
Falmouth .....	.....	58.0	79.0	42.0	18.4	37.0	1.4	S.W.	6.3	50	11.6	.....	.....	.....	.....	.....	.....
Truro .....	.....	57.3	72.0	42.0	10.9	30.0	0.9	S.W.	6.3	45	12.5	.....	.....	.....	.....	.....	.....
Torquay .....	.....	58.0	75.0	46.0	10.4	22.3	2.2	S.W.	..	49	10.4	.....	.....	.....	.....	.....	120
Exeter .....	29.656	58.6	80.7	39.0	16.5	41.7	1.4	W.	4.3	52	8.9	4.9	0.9	0.847	6.1	528	140
Chichester .....	.....	55.9	78.0	39.0	15.0	39.0	..	S.W.	..	..	10.2	.....	.....	.....	.....	.....	.....
Southampton Observatory ....	29.531	58.7	85.0	38.0	17.9	47.0	0.8	Variable	6.7	50	11.0	5.0	0.7	0.906	6.2	528	55
Uckfield .....	29.558	59.6	83.0	36.0	19.0	47.0	..	S.W.	..	45	11.7	4.5	1.8	0.706	5.6	526	180
Beckington .....	29.498	57.1	88.0	35.0	19.5	53.0	0.8	S.W.	5.8	59	12.7	4.4	0.9	0.827	5.7	529	265
Royal Observatory Greenwich ..	29.581	58.6	85.3	32.8	20.6	52.7	..	.....	..	61	8.7	4.5	1.1	0.785	5.7	526	159
Maidenstone Hill, Greenwich ..	29.571	58.4	85.5	35.8	16.4	49.7	..	S.W.	6.4	45	10.2	4.7	1.1	0.810	5.7	528	107
Lewisham .....	.....	58.4	85.0	31.9	19.6	53.1	..	.....	..	..	..	4.6	1.1	0.810	5.6	....	40
Walworth .....	29.534	59.4	85.0	34.0	19.2	51.0	3.1	S.W.	4.0	50	8.0	4.6	1.4	0.759	5.6	525	32
St. John's Wood, London .....	.....	57.1	..	..	..	..	..	.....	..	47	9.3	.....	.....	.....	.....	.....	.....
Latimer Rectory .....	29.571	56.1	84.0	31.0	23.4	53.0	1.5	Variable	6.6	52	10.5	4.5	1.1	0.817	5.5	524	335
Aylesbury .....	29.561	58.3	88.0	33.0	22.9	55.0	0.5	S.W.	6.1	47	10.4	4.4	1.2	0.781	5.5	524	280
Stone Observatory .....	29.527	56.2	76.1	37.0	15.3	39.1	0.9	S.W.	6.7	53	8.1	4.4	0.9	0.813	5.4	524	300
Hartwell House .....	29.515	57.7	89.0	29.0	25.8	60.0	0.8	S.W.	6.3	..	10.5	4.9	0.6	0.876	5.9	525	300
Saffron Walden.....	.....	56.8	82.0	32.0	17.0	50.0	2.5	S.W.	4.7	56	7.8	..	.....	.....	.....	.....	.....
Pool Cottage, Hereford .....	.....	54.8	..	..	..	..	..	S.W.	..	45	13.0	.....	.....	.....	.....	.....	.....
Cardington.....	29.591	57.6	85.0	31.0	20.2	54.0	..	S.W.	6.1	51	9.9	4.7	1.0	0.835	5.8	527	70
Thwaite .....	.....	..	87.0	38.0	..	49.0	..	S.W.	..	40	9.8	.....	.....	.....	.....	.....	200
Norwich .....	29.522	57.7	84.0	38.0	16.3	46.0	..	.....	..	38	8.1	4.7	0.8	0.870	5.8	530	39
Leicester .....	29.603	57.2	95.0	35.0	21.9	60.0	2.0	S.W.	5.3	50	11.3	3.9	1.5	0.718	4.7	529	150
Empingham .....	.....	..	..	..	..	..	..	S.W.	..	50	9.4	.....	.....	.....	.....	.....	.....
Derby .....	29.502	55.7	81.0	35.0	16.6	46.0	..	.....	..	52	11.8	4.6	0.5	0.900	5.7	528	39
Highfield House, Notts.....	29.516	57.2	84.8	37.2	16.6	47.6	..	S.W.	6.3	58	11.7	4.4	1.0	0.813	5.4	529	103
Liverpool Observatory.....	29.466	56.3	76.8	45.2	10.2	31.6	0.9	N.W.	6.7	54	8.9	4.2	0.8	0.842	5.1	530	37
Leeds .....	29.519	55.2	84.0	35.0	17.7	49.0	1.5	Variable	6.3	59	12.6	4.5	0.6	0.882	5.5	529	148
Wakefield .....	29.517	57.2	90.0	32.5	20.0	57.5	..	S.W.	..	57	9.5	4.1	1.3	0.762	5.0	527	113
Stonyhurst Observatory .....	.....	53.9	83.5	32.6	16.0	50.9	0.9	S.W.	7.4	62	15.2	4.2	0.7	0.860	5.1	523	381
York .....	.....	55.2	84.0	35.0	15.9	49.0	..	W.	..	45	9.0	.....	.....	.....	.....	.....	50
Whitehaven .....	.....	57.2	72.0	38.5	10.2	33.5	2.5	N.W.	..	50	11.0	4.3	1.2	0.780	5.3	529	....
Durham .....	29.544	54.7	79.6	34.8	15.0	44.8	1.3	S.W.	5.8	39	6.8	4.1	1.1	0.798	5.0	525	340
Newcastle .....	29.488	56.8	79.5	34.5	13.7	45.0	..	S.W.	..	31	7.9	4.5	1.2	0.790	5.5	526	121
Number of Columns .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

The mean of the numbers in the first column is 29.541 inches, and this value may be considered as that of the pressure of dry air for England during the Quarter ending 1848, Sept. 30. The differences between this number and the separate results contained in the first column, shew the probable sums of the errors of observation, and reduction, the latter arising partly from erroneously assumed altitudes, and partly in consequence of the index-errors of the instruments not having been determined. In most cases, however, the sums of these errors are small.

The mean of the numbers in the second column, for those places situated in the counties of Cornwall and Devonshire is 58°1; for those places situated south of latitude 52°, including Chichester and Hartwell is 57°8; for those places situated between the latitudes of 52° and 53°, including Saffron Walden and Highfield House, was 56°8; for those places situated between the latitudes 53° and 54°, including Liverpool and Whitehaven, but not Stonyhurst, whose mean temperature from its greater elevation is lower than that due to its latitude alone, was 56°2; and for Durham and Newcastle was 55°8; this value, however, is somewhat too high for the former place and too low for the latter, on account of the difference of elevation of those places. These values may be considered as those of the mean temperatures of the air for those different parallels of latitude during the Quarter ending 1848, Sept. 30.

The average daily range of the temperature of the air in Cornwall and Devonshire was 14°2; at Liverpool and Whitehaven was 10°2; south of latitude 52° was 19°5; between the latitudes of 52° and 53° was 15°8; between the latitudes of 53° and 54° was 15°9; and at Durham and Newcastle, was 14°4.

The greatest mean daily ranges of the temperature of the air took place at Hartwell, Latimer, Aylesbury, and Leicester respectively; and the least occurred at Liverpool, Whitehaven, Torquay, and Truro respectively.

The highest thermometer readings in air during the quarter were 95° at Leicester, 90° at Wakefield, and 89° at Hartwell, but it seems highly probable that these readings are greater than the temperature of the air really reached. The reading 88° seems to be confirmed, and this value may be considered as the highest during the quarter. The lowest values of the thermometer readings in air were 29° at Hartwell, 31° at Latimer and Cardington. The extreme range of temperature of the air during the quarter was therefore about 59°.

The average quarterly range of the reading of the thermometer in air in Cornwall and Devonshire was 33°2; at Liverpool and Whitehaven was 32°5; and the mean of the numbers at all the other places is 49°2. The highest and lowest readings at Stone, and all depending upon them are evidently erroneous.

From the numbers in this quarter, as well as those of preceding quarters, it appears that the Vale of Aylesbury is subject to greater extremes of temperature than any other part of the country of equal extent.

The great mass of air has passed from the S.W. in all places except Liverpool and Whitehaven, at both of which places it seems to have passed from the N.W. By reference to the monthly Table it will be seen that this was particularly the case in July and August, but in September the direction of the wind was frequently from the E., and its compounds.

From the numbers in the ninth column the distribution of cloud seems to have been nearly the same in amount at most places, and such as to have covered about three-fifths of the whole sky.

The fall of rain during the quarter has greatly exceeded the average amount for the season, and this was particularly the case in the month of August. The places at which rain has fallen on the greatest number of days were Stonyhurst, Greenwich, Beckington, Leeds, Highfield House, Helston, and Wakefield, and the average number at those places was 59; and the places at which rain fell on the least number of days are those situated near the Eastern coast. The places at which the largest falls have taken place were Stonyhurst, Hereford, Beckington, Leeds, and Torquay. The places where the falls have been the least in amount are Durham, Newcastle, Saffron Walden, Walworth, Stone, and Norwich. The amount at Stone being so much less than the fall at adjacent places, seems to be strange, and this was the case in the preceding quarter, in consequence of which the Rev. J. B. Reade, on August 17, wrote to me, stating that "There have been many electrical clouds giving copious showers around us, especially on the Chiltern Hills, and in the neighbourhood of Aylesbury, while we were in sunshine. This was particularly the case yesterday afternoon."

The numbers in columns 12 to 16 shew the mean values of the hygrometrical results at every station, from which we find, that  
 The mean weight of vapour in a cubic foot of air for England (excepting Cornwall and Devonshire) in the quarter ending Sept. 30, 1848, was 4.5 grains.  
 The mean additional weight required to saturate a cubic foot of air, &c. .... was 1.0 grain.  
 The mean degree of humidity (complete saturation = 1), &c. .... was 0.815  
 The mean amount of vapour mixed with the air would have produced water, if all had been precipitated at one time on the surface of the earth, to the depth of ..... 5.5 inches.  
 The mean weight of a cubic foot of air at the level of the sea, under the mean pressure, temperature and humidity ..... was 529.3 grains.  
 And these values for Cornwall and Devonshire were 4.8 grains; 0.9 grain; 0.843; 6.0 inches; and 530 grains respectively.





RETURN  
OF THE  
Mortality in 117 Districts of England,  
For the Quarter ending December 31st, 1848.

ANNUAL SERIES VII.] PUBLISHED BY AUTHORITY OF THE REGISTRAR GENERAL. [1848.—No. 4.

STATE OF THE PUBLIC HEALTH IN THE LAST QUARTER OF THE YEAR 1848.

“ The Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6612958 in 1841.”

It is gratifying to find that the mortality of the Quarter has been below the average. Only 46124, deaths have been registered. The deaths in the corresponding Quarters of 1846, and 1847, were 53055, and 57925; so that notwithstanding some increase of population, the decrease of deaths on 1847, is 11801; on 1846, is 6931. Taking the increase of population into account, the deaths are 2571 below the average of the deaths in 9 preceding years.

The general mortality of the country was comparatively low in the five years of 1841—5; in the middle of 1846 epidemics set in, and proved fatal through the rest of 1846, through 1847, and the winter of 1848. A manifest improvement took place in the spring of the year 1848; the summer was of the average degree of health; and although cases of cholera have occurred in London, and several districts during this Quarter, the Returns in the subjoined Tables prove that the epidemic has hitherto produced no sensible effect on the mortality.

	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
Deaths registered in the December Quarters of 10 years .....	41,710	44,186	39,292	39,662	42,608	44,080	39,293	53,055	57,925	46,121
Deaths which would have been registered if the mortality had been uniform, and the Numbers had increased from 1839 at the rate of 1·75 per cent. annually. ....	41,656	42,385	43,126	43,881	44,640	45,430	46,225	47,034	47,857	48,695
UNHEALTHY SEASONS Difference above the calculated number .....	84	1,801	..	..	..	..	..	6,021	10,068	..
HEALTHY SEASONS Difference below the calculated number .....	..	..	3,834	4,219	2,041	1,350	6,932	..	..	2,571

DEATHS REGISTERED in each of the Four Quarters of the Ten Years 1839 — 1848, in 117 of the DISTRICTS of ENGLAND and WALES.

Quarters ending	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
March .....	42,410	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
June .....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,734	51,585	46,552
September .....	37,317	39,498	36,058	39,409	36,953	38,933	36,139	51,405	49,479	43,445
December .....	41,740	44,186	39,292	39,662	42,608	44,080	39,293	53,055	57,925	46,124
TOTAL .....	162,711	172,134	161,450	162,543	163,652	168,126	166,275	192,044	215,094	193,831

LONDON.—The deaths in London were 14725; of which 5137 were caused by diseases of the zymotic class; namely 1765 by *scarlatina*, 883 by typhus, 472 by hooping cough, 126 by erysipelas. Scarlatina has been epidemic, and has raged with great violence. It has destroyed more lives than any other disease; and



shows no sign of abatement. The deaths by scarlatina in each of the four quarters of 1848, were 615, 816, 1560, and 1765; making 4756 deaths in the aggregate. Small pox was fatal to 413 persons; chiefly children who had never been vaccinated. The deaths from small pox in the autumns of 1841—47, were 75, 108, 114, 571, 106, 42, and 372. Nearly all these deaths arose from the neglect of vaccination; which under a recent Act of the Legislature, is nevertheless gratuitously performed on all applicants, at stations in every district of London.\* *Typhus* was fatal to 883 persons: this disease is decreasing, for the deaths in the autumn of 1847, were 1279. The deaths from cholera were 468; the deaths in the autumns of the seven previous years were 3, 13, 14, 5, 11, 15, 12. Consumption was less fatal than usual; only 1450 persons died of that malady. Heart diseases, lung diseases, and liver diseases, were much less fatal, not only than in 1847, when influenza was prevalent, but less fatal, than in autumn 1846. *A hundred and sixty-three* mothers died in childbirth; about 17774 children were born alive; so that one mother died to every 109 children born alive. Of the deaths, 100 were ascribed to *metria*, or childbirth fever. The mortality from this cause is high, and deserves grave consideration. Thirteen deaths were ascribed directly to intemperance. *Thirty-four* deaths are referred to *delirium tremens*, generally the result of drinking spirits to excess—a slow but certain suicide. Of the violent deaths, 24 were caused by poison, 31 by wounds, 22 by hanging, 68 by drowning, 63 by burns and scalds, 131 by fractures and contusions.

**SOUTH EASTERN DIVISION.**—The mortality in Brighton and Portsea Island have been high during the quarter. Scarlatina, prevailed in Brighton, small pox in Portsea Island; typhus in both districts. Windsor was also visited by typhus and scarlatina, and a vagrant died there of English cholera after 21 hours illness. The aggregate mortality of Kent, Surrey, Sussex, Hampshire, and Berkshire, in the three last autumns was above the average: the births were 11834; the deaths 8035.

**SOUTH MIDLAND DIVISION.** The mortality of St. Albans, and of Great Marlow, Wycombe, was above the average. Scarlatina prevailed in both districts. Bedford, Northampton, and Oxford were unusually healthy. Typhus prevailed at Cambridge, and there several cases of cholera were registered; the deaths were but slightly increased. The deaths in the South Midland Counties were 6655; they were 7199 in the autumn of 1846; and only 5963, in the autumn of 1847. The births were 8996.

**EASTERN DIVISION.**—The mortality of Colchester, Ipswich, Norwich, and Yarmouth, deviated little from the average of the preceding autumn quarters. On the whole, Essex, Suffolk, and Norfolk, were much healthier than in the autumn of 1846, but less healthy than in the autumn of 1847.

**SOUTH WESTERN DIVISION.**—The same remarks will apply to Wiltshire, Dorsetshire, Devonshire, Cornwall, and Somersetshire. The births were 12595, the deaths 8290. Exeter and Bath have been unusually healthy; the parishes surrounding Exeter, in the district of St. Thomas, suffered from scarlatina, measles, and fever. Plymouth, and Penzance have been unhealthy. Small pox destroyed 85 lives in Plymouth. Only 1 of the 37 who died in the sub-district of Charles the Martyr had been vaccinated. Dysentery was epidemic in Penzance, and St. Ives. Sickness prevailed very much in Marazion; from the want of employment, great numbers of the labouring classes left the district.

**WEST MIDLAND DIVISION.** The deaths in Bristol, Stroud, Cheltenham, and Hereford, were somewhat

\* In May, 1848, the Poor Law Board issued a circular urging on the Guardians the propriety of adopting new measures for extending vaccination; and I requested the Registrars of Births to give copies of the Notices respecting gratuitous vaccination, "to all persons attending for the purpose of registering a birth." The Poor Law Board has placed at my disposal the subjoined return, from which it will be seen that 374,232 persons were successfully vaccinated in 1848; while only 247,762 persons were successfully vaccinated in 1847. If the same progress be made in 1849, small-pox must soon disappear as an epidemic.

#### VACCINATION.

Abstract of Returns of the Number of Persons Vaccinated by the Public Vaccinators in 626 Unions and Parishes in England and Wales, in the years 1847—1848.

Years.	Number of Unions, &c.	Number of Vaccinators.	Number of Persons Vaccinated.	Number of Persons successfully Vaccinated.
1848	626	3,154	389,367	374,232
1847	621	2,855	267,895	247,762
Increase in } 1848	5	299	121,472	126,470

more numerous than in the autumn of 1847. Scarlatina, and small pox prevailed slightly in Bristol. The Registrar of St. Mary, Redcliff, justly complains that the burial of the dead is too long deferred in his district.

The mortality of Clifton, Shrewsbury, Worcester, and Kidderminster, was rather lower than in preceding years. A most striking improvement is observed in the health of the coal and iron districts of Staffordshire, and Warwickshire. The deaths registered in Birmingham during the autumn quarters of 1844—8, were 964, 777, 1338, 1795, and 851. In Dudley, Walsall, and Wolverhampton, the diminution in the mortality of the last quarter of 1848 is equally striking. In Wolstanton and Coventry, the mortality also declined. The deaths registered in all the districts of Gloucestershire, Herefordshire, Shropshire, Worcestershire, Staffordshire, and Warwickshire, were 12859, 12742, and 10477, in the autumn quarters of 1846—8. There were fewer births in 1848, than in 1847. The births in the autumn quarter of 1848 were 10004, the deaths only 10477.

**NORTH MIDLAND DIVISION.**—In Nottingham, and Derby, the mortality was low. Diarrhœa and dysentery were unusually prevalent at Nottingham, in October; and one case of cholera occurred in November. Mumps attacked several individuals in confined and unhealthy localities; but the disease was not fatal. Small pox was prevalent in Leicester; scarlatina in Lincoln; typhus in both districts; and the mortality was higher than in the autumn of 1847. In the five counties of Leicestershire, Rutlandshire, Lincolnshire, Nottinghamshire, and Derbyshire, the deaths were 6863, 6002, and 5700, in the autumn quarters of 1846—8. The births in the last quarter were 8964.

**NORTH WESTERN DIVISION.**—The mortality of Stockport and Macclesfield; Chester, Liverpool, and West Derby; Blackburn, Preston, Rochdale, Bury, Bolton, Wigan, and Prescott; Chorlton, Manchester, Salford, Ashton and Oldham—was lower than in the autumn quarter of 1846; in some districts the reduction in the mortality was 50 per cent. In Preston 968, 636, and 424; in Manchester 2318, 2210, and 1651 deaths were registered in the autumn Quarters of 1846-7-8: in the same Quarters the total deaths registered in Lancashire and Cheshire were 20392, 18696, and 14896. The births were 21245 and 19425 in the autumn Quarters of 1846 and 1848. The births and deaths decreased. The decrease of mortality is ascribed to improvements in trade; and by some to the removal of the population. The commercial depression began in 1846; the mills were stopped and were only partially opened in 1847; many persons therefore removed to towns where particular manufactures offered employment, and have not been induced to return now that trade has been restored—(Registrar of Heaton Norris, Stockport.) The Registrar of the Market Street sub-district, Manchester, says—

“The state of the district, generally is healthy. It is said, that trade for some time has been making slow but steady progress, and in the opinion of many, employment will, in a brief period, be universal among the artisans in the manufacturing districts.”

**The Registrar of Ashton Town, Ashton-under-Lyne, says—**

“The births (194) are less than usual in the quarter, and the number in the year less by about 7 per cent. than the average of the last 5 years. There was a similar decrease from 1840 to 1842 inclusive, and 495 empty houses were counted at the census. There are (I believe) at present upwards of 500 empty houses. High prices of food and want of employment preceded both periods. There has been also a much more extensive emigration than at any time previous, which with the other circumstances accounts for the diminution of births. Deaths 212: being about the average of corresponding quarters: scarlatina and diarrhœa prevailed; the former fatal in 25 cases, the latter in 10.”

**YORKSHIRE.**—The mortality in the great town districts of Yorkshire has been below the average; and very much below the mortality of the two preceding autumns. The deaths in Sheffield were 803, 734, 591, in the autumn quarters 1846-7-8; in Huddersfield 959, 708, 649; in Bradford 1086, 895, 833; Leeds and Hunslet 1390, 1413, and 1082; Hull 404, 489, 319; York 343, 522, 321. Three cases of death by cholera were registered in Huddersfield; three (called English cholera) in Horton, Bradford; 12 in the Humber sub-district of Hull; 8 in Micklegate, York. Leeds is healthy, but diarrhœa and dysentery have been fatal to a few persons. The deaths registered in the districts of Yorkshire were 11190, 10508, and 9005 in the three autumns of 1846—7—8. The births in the autumn quarters of 1846 and 1848 were 13963 and 13883.

**NORTHERN DIVISION.**—The mortality in Gateshead, Tynemouth, Newcastle-on-Tyne, Carlisle, and Cockermouth, was much lower than in the autumn quarters of 1846—7. The deaths in Newcastle were 888, 904, and 420 in the three quarters; in Gateshead 426, 293, and 219; in Carlisle 327, 279, and 192; in Sunderland 357, 496, and 400. Cases of cholera have occurred in *Sunderland, Tynemouth, and Newcastle-on-Tyne.*



The Registrar of Monkwearmouth, Sunderland, says—

"The excess of deaths is due to cholera, which was fatal in 29 cases, of which 8 were those of children, almost all about the coal mines. The weather has been very cold and wet with sudden and severe changes. Sanatory measures are in contemplation which if carried out, will be productive of much good. I have reported to the guardians about 25 cases that required to be dealt with, and some improvement has been made. There is great deficiency of light, air, and water. Many passages and staircases are quite dark, and windows are built up to escape the tax. The increase of births, which were 166, is owing to the movement of population, caused by the making of new docks, and the enlargement of coal mines at Monkwearmouth."

The deaths in Durham, Northumberland, Cumberland, and Westmoreland, were 6803, 5658, and 4411 in the autumn quarters of 1846—7—8. The mortality decreased 35 per cent. The births were 7374 in the last quarter of the year 1846, and 7996 in the last quarter of 1848.

WELSH DIVISION. The mortality of Merthyr Tydfil, Newtown, and Holywell, is lower than it was in the corresponding quarters of 1846—7. In Wrexham, 302 persons died within three months. The Registrar of the town reports that—

"Sanatory improvement in the town is under consideration, but, at present, obstacles prevent the sanatory committee from proceeding with the measures in contemplation. A vast majority of the cottages in the town are never lime-washed from year to year; sewerage is unknown; stagnant filth meets the eye in every bypath, and in places of public resort."

The deaths in Wales and Monmouthshire were 5900, 5600, and 5286 in the autumn quarters of 1846—7—8. The births were 8537 in the autumn quarter of 1846, and 7974 in the autumn quarter of 1848.

ENGLAND. The number of Registrars in England is 2189. Hitherto only 582 Registrars have made the returns from which the Quarterly Tables are compiled. It is proposed to publish the returns complete for the March quarter of 1849. The returns for the December quarter, 1848, have been procured, and although the notes refer chiefly to the large town districts, a brief summary of the deaths in the whole country may not be uninteresting. The facts returned by the Registrars for 1848 have not yet been checked; but it is believed that they contain no errors which can affect the general results.

	POPULATION		Deaths in the Autumn Quarters of Nine Years, 1840—8.
	1831	1841	
ALL ENGLAND.	13896797	15914148	821181
The 582 Registrars' Districts—chiefly comprising Large Towns—which have hitherto made the Return in the Quarterly Tables .....	5484291	6612958	406238
The remaining 1607 Registrars' Districts chiefly com- prising Country Districts, and small Towns .....	8412506	9301190	414943

These facts are quite in conformity with those exhibited in other returns; yet they are in many respects remarkable. The population of the large town districts was nearly  $6\frac{2}{3}$  millions in 1841, the deaths in the nine years, 1840—8, were 406,238; the population of the small town and country districts was  $9\frac{1}{2}$  millions in 1841, the deaths in the nine years 41493. The population of the first was to that of the second class of districts nearly as 2 to 3; if the mortality in the large town districts had not been greater than it was in the country and in the small towns, the deaths would by this proportion ( $\frac{2}{3}$ ) have been 270826 in the large towns, or less by 135000 than the numbers actually registered. The population increases faster in the towns than in the country, chiefly in consequence of immigration from the country into the towns; and some correction is required on this account, as well as on account of difference of age, and income; but after every allowance has been made for these influences, a hundred thousand deaths in the nine last quarters of each of the nine years remain, which must be chiefly referred to the want of pure air and water, house-room and drainage, which good laws and institutions may supply.

CHOLERA.—The deaths from Cholera in London have already been mentioned. The following (p. 5) is a list of all the other districts in which the Registrars mention cases of Cholera. Epidemic Cholera, it will be recollected, appeared in England at the close of the year 1831, or at the same season as it appeared in 1848. It expended its fury, and caused nearly all the mortality in the next year. We may fervently hope that it will not a second time pursue a similar course. No efforts should be spared to prevent or control its ravages. Much may be done to mitigate its severity, if not to avert its invasion. The cholera, unlike some other epidemics advances slowly; but our sanatory defences have unfortunately advanced still more slowly; so that the enemy finds Glasgow, Edinburgh, London, and the great cities of the kingdom as assailable now, as they

re in 1832. It was evident in 1846, that cholera would reach England. This was referred to in a passage of the remarks on the Tables for the quarter ending June, 1846.—“Notwithstanding the improvements effected when cholera was last epidemic; the foul untrapped sewers, and the ground areas of the best streets, emit noisome smells, and volatile poisons, which are as fatal as arsenic to a certain number of persons. London is surrounded, too, by stagnant water, and putrid ditches, as some cities are by walls. It would be well not *to wait carelessly until cholera reaches the country, but ‘to look before,’ remove these nuisances, and purify the reeking atmosphere, which gives the disease breath, life, and being.*” The unfortunate have waited; many of the evils complained of in 1846 are not removed. But a Health of Towns’ Act exists, a map of London is in progress on which the fatality of epidemics may be traced and which will facilitate the drainage, a new commission of sewers has been issued, a Board of Health has been constituted, innumerable reports have been printed, and if no time is lost—much may yet be done before a great epidemic is in a condition to put forth its strength in summer. The establishment at Tooting has shown us how cholera is made fatal; it is still easier to show how it may be made comparatively innoxious. And the lesson will probably not be so soon forgotten as it was in 1832.\*

The Meteorological condition of the atmosphere is elaborately described by Mr. Glaisher; by whom the returns with which I have been favoured from the country have been arranged and analysed.

\* Mr. Martin, in one of the ablest local reports that emanated from the Health of Towns Commission, after visiting Nottingham, Coventry, Leicester, by, Norwich, and Portsmouth, and pointing out the bad sanitary arrangements which he everywhere witnessed, remarks:—“It is thence that dread of epidemic cholera, [1831–2,] everywhere and for the moment stimulated the people, and the authorities in most of our towns, to vigorous measures of inquiry at least, as to matters supposed to be influential in promoting and keeping up the disease in particular, and epidemics in general. In many places, indeed, the most salutary preventive measures were sketched out for immediate adoption; they were then, perhaps, considered in a hasty manner, and the instant cholera took its departure, those most excellent plans for the abatement of nuisances, and for the promotion of sanitary measures, disappeared along with it. Nothing was then done, nothing has been done since, and nothing will be done till it is so ordered, till some responsible authority is placed to see that the thing is done.”—Health of Towns’ Commission, 2nd Local Report, vol. 2, 8vo., p. 114.

No. of District and Sub-District.	District.	Sub-District.	Deaths reported by the Registrars as having occurred from Cholera, in the quarter; exclusive of those in London.
50, 2	Dartford .....	Dartford .....	1 case of cholera. (Query death.)
51, 1	Gravesend .....	Gravesend .....	3 deaths from cholera.
54, 2	Medway .....	Gillingham .....	9 deaths from cholera, (11 attacked.)
70, 3	Isle of Thanet .....	Ramsgate .....	1 death from cholera.
08, 1	Stockbridge .....	Broughton .....	1 death from cholera.
27, 3	Reading .....	St. Giles .....	2 cases.
33, 1	Uxbridge .....	Hillingdon .....	6 deaths.
37, 5	Edmonton .....	Waltham Abbey .....	1 death.
38, 3	Ware .....	Ware .....	Measles and <i>English</i> cholera have been prevalent.
48, 2	Amersham .....	Chesham .....	Epidemic cholera 37; English cholera 4.
48, 4	Amersham .....	Chalfont .....	1 of epidemic cholera.
50, 1	Wycombe .....	High Wycombe .....	1 death from English cholera.
63, 3	Banbury .....	Croft .....	1 death from English cholera.
76, 4	Huntingdon .....	Huntingdon .....	No cases beyond those ascribed to English cholera or diarrhoea.
187, 4	Cambridge .....	St. Giles .....	Several cases of cholera have occurred.
187, 1	Cambridge .....	St. Andrew the Less .....	1 case terminating fatally, 3 hours after attack.
193, 4	Wisbeach .....	Terrington, St. Clement ..	1 case of English cholera.
193, 6	Wisbeach .....	Upwell .....	15 deaths.
227, 2	Mutford .....	Lowestoft .....	2 deaths.
227, 3	Mutford .....	Gorleston .....	2 deaths.
232, 1	Aylsham .....	Eynsford .....	1 death from English cholera.
232, 2	Aylsham .....	Buxton .....	1 case of cholera.
242, 5	Mitford .....	Litcham .....	1 death.
247, 2	Downham .....	Downham .....	3 cases of cholera.
254, 1	Calne .....	Calne .....	1 death from English cholera.
263, 1	Alderbury .....	Alderbury .....	1 death from cholera.
403, 5	Warwick .....	Radford .....	1 death from cholera.
422, 3	Bourne .....	Bourne .....	1 death (supposed cholera); and 1 English cholera.
433, 3	Glanford Brigg .....	Barton .....	1 death.
434, 4	Gainsborough .....	Gainsborough .....	8 cases of cholera; also several of English cholera.
440, 3	Nottingham .....	St. Ann .....	1 case of cholera, resembling Asiatic.
452, 3	Stockport .....	Heaton Norris .....	1 death from common cholera.
459, 3	Great Boughton .....	Chester Cathedral .....	2 deaths.
461, 3	Liverpool .....	Dale Street .....	1 case of cholera.
462, 1	West Derby .....	Toxteth Park .....	1 Asiatic, and 1 English cholera.
462, 6	West Derby .....	West Derby .....	2 cases of cholera.
473, 3	Manchester .....	London Road .....	1 case, rapidly fatal, but certified as not being Asiatic in its character.
495, 1	Todmorden .....	Hebden Bridge .....	Cholera among the prevailing diseases, during the quarter.
497, 9	Huddersfield .....	Huddersfield .....	3 cases of cholera.
505, 4	Ecclesfield .....	Barnsley .....	2 cases cholera.
513, 2	Selby .....	Selby .....	Asiatic cholera now prevails greatly; 15 deaths, out of about 20 cases, having occurred during the last week or two.
515, 3	York .....	Micklegate .....	8 cases of cholera.
520, 1	Hull .....	Humber .....	12 cases of cholera during the quarter; out of 10 successive deaths registered from 16th—20th October, 8 were from cholera.
523, 1	Driffield .....	Foston .....	1 death from cholera.
549, 5	Sunderland .....	Monkwearmouth .....	29 fatal cases of cholera, of which 8 were children.
552, 3	Newcastle-upon-Tyne .....	St. Nicholas .....	1 case of cholera.
552, 4	Newcastle-upon-Tyne .....	All Saints .....	3 cases registered, 2 of which were of persons just come from places infected with the disease.
553, 1	Tynemouth .....	WallSEND .....	1 death from Asiatic cholera.
553, 6	Tynemouth .....	Blyth .....	Asiatic cholera prevalent; 26 deaths having been registered from that cause.
558, 2	Morpeth .....	Bedlington .....	7 deaths from Asiatic cholera.
561, 3	Berwick-upon-Tweed .....	Norhamshire .....	Deaths are double the average, owing to cholera in the west part of the sub-district.
567, 2	Longtown .....	Low Longtown .....	3 cases of cholera.



# TABLE OF THE DEATHS

In 117 of the Districts of England (including the principal Towns): shewing the Number of Deaths Registered in the Quarters ending December 31st.\*

Parts of Divisions and Districts	Population 1841	Deaths Registered in the Quarters ending December 31st								
		Years								
		1840	1841	1842	1843	1844	1845	1846	1847	1848
Total .....	6612958	44186	30202	30662	42608	44080	39293	53955	57925	46124
District exclusive of London .....	4664589	31167	28188	27708	28513	30261	27455	39834	38320	31399
Aggregate Deaths in parts of the 11 Divisions of England.										

\* The last Quarter of 1848, for London ended December 30th.

<sup>†</sup> The December Quarter of 1847 contains the deaths in 14 weeks: deducting 1 week (the 6th in the Quarter) for the sake of comparison with the corresponding Quarter of former Years, the number of deaths in the West, North, Central, East, and South Districts will be respectively, 2584, 3416, 3396, 4202, 4955. London 18563.

† The Mortality of the Districts of Wandsworth, and Lewisham, and Sub-District of Hampstead, is included in the above Table, in each of the nine Years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

§ The former District of Ashton is now divided into the Districts of *Ashton* and *Oldham*, both included in the present Return.  
 ¶ The former District of Leeds is now divided into the Districts of *Leeds* and *Hungate*, both included in the present Return.



# A TABLE OF THE DEATHS IN LONDON FROM ALL CAUSES,

Registered in the Eight Quarters ending December 1841-42-43-44-45-46-47-48.

CAUSES OF DEATH	Quarters ending December*								CAUSES OF DEATH	Quarters ending December*							
	YEARS									YEARS							
	1841	1842	1843	1844	1845	1846	1847	1848		1841	1842	1843	1844	1845	1846	1847	1848
I.—Zymotic Diseases, &c.	2030	2082	2961	3008	2744	2211	5825	5137	IV.—Cephalitis	122	148	152	160	142	148	154	115
II.—Tubercular Diseases	2191	2168	2415	2186	1995	2275	2630	2058	Apoplexy	239	224	249	311	272	347	349	336
III.—Diseases of the Brain, Spinal Marrow, Nerves and Senses.	1345	1472	1609	1629	1341	1617	1742	1465	Paralysis	211	198	235	235	213	267	307	249
IV.—Diseases of the Heart and Blood Vessels	258	290	331	474	417	572	573	479	Delirium Tremens	27	16	21	25	33	42	45	34
V.—Diseases of the Stomach, Liver, and other Organs of Digestion.	764	716	875	768	698	861	964	765	Chorea	1	1	1	6	..	1	1	1
VI.—Diseases of the Kidneys, &c.	54	95	89	101	140	141	190	141	Epilepsy	43	49	36	54	68	77	90	73
VII.—Childbirth, Diseases of the Uterus, &c.	112	144	143	173	141	227	222	106	Tetanus	3	1	7	4	6	5	5	4
VIII.—Rheumatism, Diseases of the Bones, Joints, &c.	59	81	70	94	89	125	139	105	Insanity	11	14	22	14	30	18	26	24
IX.—Diseases of the Skin, Cellular Tissue, &c.	4	8	11	7	17	27	24	17	Convulsions	582	703	758	699	450	548	592	477
X.—Malformations	5	17	30	17	54	46	52	56	Disease of Brain, &c.	106	118	128	121	127	164	173	152
XI.—Premature Birth and Debility	295	244	270	281	246	301	336	292	V.—Pericarditis	4	9	14	35	22	26	27	34
XII.—Atrophy	80	95	172	164	186	255	390	288	Aneurism	6	7	9	10	19	16	24	16
XIII.—Age	798	918	980	898	519	651	957	527	Disease of Heart	248	274	308	429	376	530	522	429
XIV.—Sudden	191	237	170	186	82	93	225	162	VI.—Laryngitis	6	6	14	17	27	33	71	44
XV.—Violence, Privation, Cold & Intemperance	301	325	301	414	328	436	529	412	Bronchitis	140	213	286	394	591	892	1642	766
XVI.—Small Pox	75	108	114	571	106	42	372	413	Pleurisy	29	20	22	30	43	43	76	36
XVII.—Measles	409	346	456	385	927	105	881	218	Pneumonia	948	1314	1729	1405	1131	1101	1743	963
XVIII.—Scarlatina	181	522	718	872	269	322	747	1765	Asthma	294	278	320	366	190	313	428	146
XIX.—Hooping Cough	652	309	468	277	557	368	426	472	Dis. of Lungs, &c.	177	207	192	256	145	186	184	109
XX.—Croup	128	112	127	102	82	65	116	62	VII.—Teething	232	173	270	171	113	103	141	91
XXI.—Thrush	62	59	87	52	46	61	52	48	Quinsey	20	23	26	35	10	14	34	20
XXII.—Diarrhoea	112	87	268	129	199	331	400	375	Gastritis	220	205	235	184	114	112	135	96
XXIII.—Dysentery	20	49	103	34	25	43	91	74	Enteritis	13	25	20	29	45	55	86	62
XXIV.—Cholera	3	13	14	5	11	15	12	468	Peritonitis	13	8	21	24	29	26	36	28
XXV.—Influenza	13	15	40	32	20	66	1161	24	Ascites	13	8	21	24	29	26	36	28
XXVI.—Purpura and Scurvy	2	4	4	6	8	5	17	14	Ulceration (of Intestines, &c.)	21	18	32	20	35	36	31	30
XXVII.—Ague	3	8	6	14	3	6	12	8	Hernia	25	27	21	27	22	47	48	46
XXVIII.—Remittent Fever	1	4	8	10	12	17	31	30	Ileus	33	37	33	29	16	34	44	28
XXIX.—Infantile Fever	5	4	11	11	10	5	9	12	Intussusception	3	3	6	8	6	9	10	9
XXX.—Typhus	291	359	460	385	358	619	1279	883	Stricture (of the Intestinal Canal)	4	6	5	6	12	8	11	11
XXXI.—Metria or Puerperal Fever, see Childbirth	..	..	..	..	..	..	..	100	Disease of Stomach, &c.	26	63	80	52	71	101	98	86
XXXII.—Rheumatic Fever, see Rheumatism	..	..	..	..	..	..	..	13	Disease of Pancreas	1	..	..	1	1	3	1	..
XXXIII.—Erysipelas	64	78	67	106	77	106	176	126	Hepatitis	6	14	17	23	54	50	58	45
XXXIV.—Syphilis	7	4	9	17	31	32	32	32	Jaundice	36	29	24	34	29	37	30	36
XXXV.—Noma or Canker, see Mortification	..	..	..	..	2	3	11	..	Disease of Liver	111	84	83	108	127	194	177	147
XXXVI.—Hydrophobia	2	1	1	..	1	..	..	..	Disease of Spleen	..	1	2	2	4	4	1	4
XXXVII.—Hæmorrhage	31	47	55	49	35	43	62	42	VIII.—Nephritis	8	3	10	5	11	1	7	2
XXXVIII.—Dropsy	498	490	466	423	182	216	248	228	Nephria (or Bright's Dis.) see Dis. of Kidneys	..	..	..	..	..	..	..	40
XXXIX.—Abscess	44	28	30	30	20	18	22	27	Ischuria	1	1	3	1	..	1	6	1
XL.—Ulcer	10	3	8	8	15	15	18	17	Diabetes	3	3	5	10	12	3	8	13
XLI.—Fistula	3	4	7	1	3	8	5	2	Stone	3	4	1	9	11	8	10	4
XLII.—Mortification	54	49	65	61	27	47	43	42	Cystitis	5	8	3	4	6	3	9	6
XLIII.—Cancer	128	134	152	161	207	219	214	240	Stricture of the Urethra	4	16	11	12	20	18	15	10
XLIV.—Gout	12	22	13	10	18	14	17	7	Disease of Kidneys, &c.	30	60	56	60	80	107	135	65
XLV.—Scrofula	23	32	37	37	65	71	84	92	IX.—Paramenia	3	3	4	..	7	6	5	5
XLVI.—Tabes Mesenterica	74	64	136	101	162	177	265	174	Ovarian Dropsy	1	3	5	9	8	7	9	8
XLVII.—Phthisis or Consumption	1708	1700	1771	1676	1382	1685	1873	1450	Childbirth, see Metria	88	107	95	121	95	163	170	63
XLVIII.—Hydrocephalus	386	372	471	372	386	342	408	342	Dis. of Uterus, &c.	20	31	39	43	31	51	38	30
									X.—Arthritis	..	..	2	..	3	3	5	3
									Rheumatism	31	47	27	43	46	67	65	69
									Dis. of Joints, &c.	28	34	41	51	40	55	69	33
									XI.—Carbuncle	..	..	4	1	3	1	5	4
									Phlegmon	3	..	1	2	1	9	8	5
									Disease of Skin, &c.	1	8	6	4	13	17	11	8
									XVII.—Intemperance	4	8	8	10	23	24	28	13
									Privation	10	6	5	10	6	15	12	14
									Want of Breast Milk, see Privation & Atrophy	..	..	..	..	..	..	..	35
									Neglect	..	..	..	..	..	..	..	..
									Cold, see Privation	..	..	..	..	..	..	..	..
									Poison	..	..	..	..	..	..	..	24
									Burns & Scalds	..	..	..	..	..	..	..	..
									Hanging, &c.	..	..	..	..	..	..	..	22
									Drowning	287	311	288	394	299	397	489	8
									Fractures and Contusions	..	..	..	..	..	..	..	131
									Wounds	..	..	..	..	..	..	..	31
									Other Violence	..	..	..	..	..	..	..	11
									Causes not specified	243	247	309	208	207	235	34	..

See first two notes of page 6.

The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan Returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the Quarters ending December they were respectively (1841) 127; (1842) 118; (1843) 159; (1844) 163; (1845) 143; (1846) 188.

Under the head of *sudden deaths* are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by coroners in vague terms, such as "found dead," "natural causes," &c. &c.

In the years previous to 1848, "Worms" and "Infantile Fever," were classed together. The former is now placed to disease of *stomach*, &c.

NOTE.—It will be observed that the classification of the Abstract is now slightly modified in conformity with the second edition of the nosology. The extension of the list is chiefly due to the improvements in the character of the returns, which are now made, in 93 cases out of 100, by the medical attendants of the deceased and by the coroners.



## BIRTHS.

Divisions.	Population.		Quarters ending December.									
	1831.	1841.	1839	1840	1841.	1842.	1843.	1844.	1845.	1846.	1848.	
ENGLAND .....	13896797	15914148*	120110	121117	124686	124732	131048	130166	131219	139349	133300	
1. London .....	1654994	1948369	13285	14018	14111	15304	15676	15967	16366	17403	17774	
2. South Eastern ..	1320843	1479863	10415	10428	10632	11069	11500	11648	11161	12589	11834	
3. South Midland ..	1030420	1141542	9098	8839	9045	9220	9422	8968	9206	10046	8996	
4. Eastern .....	974815	1040616	7306	7277	7679	7794	8200	7839	7896	8386	7855	
5. South Western ..	1592986	1740032	12268	12219	12898	12963	13566	13296	12836	13570	12595	
6. West Midland ..	1655054	1902125	14652	14992	15424	14806	15403	15122	15142	16787	16004	
7. North Midland ..	986592	1110203	8868	8892	9001	8743	9129	8834	9142	9449	8964	
8. North Western ..	1677649	2067164	17632	17554	17871	17674	19438	19786	20572	21245	19425	
9. York .....	1366802	1584116	12839	12595	13261	12664	13181	13558	13699	13963	13883	
10. Northern .....	712313	826555	6431	6908	6993	6942	7204	7064	7254	7374	7996	
11. Welsh .....	924329	1068547	7316	7395	7771	7553	8329	8084	7945	8537	7974	

## DEATHS.

Divisions.	Population.		Quarters ending December.									
	1831.	1841.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.
ENGLAND .....	13896797	15914148*	84995	89630	83204	84328	87493	90864	80681	108937	103489	92555
1. London .....	1654994	1948369	11570	12903	11128	11928	14107	14101	12037	13630	18601	14738 <sup>†</sup>
2. South Eastern ..	1320843	1479863	6625	6975	6946	7099	7543	7431	6311	8626	7566	8035
3. South Midland ..	1030420	1141542	5692	6029	6030	5711	6061	6337	5322	7199	5963	6655
4. Eastern .....	974815	1040616	4881	5223	4923	4992	4974	5483	4525	6118	4671	5062
5. South Western ..	1592986	1740032	7212	8211	7917	9461	8843	9025	7463	9357	7482	8290
6. West Midland ..	1655054	1902125	9828	10664	10678	10374	10271	11078	9479	12859	12742	10477
7. North Midland ..	986592	1110203	6177	6254	5378	5385	5548	5703	4999	6863	6002	5700
8. North Western ..	1677649	2067164	14659	14835	12918	12917	13280	14031	13274	20392	18696	14896
9. York .....	1366802	1584116	8944	8920	7976	7834	7931	8431	8202	11190	10508	9005
10. Northern .....	712313	826555	4576	4541	4541	4027	4121	3813	4202	6803	5658	4411
11. Welsh .....	924329	1068547	4831	5075	4769	4570	4814	5431	4867	5900	5600	5286

\* This population includes 5016 persons travelling by railways and canals.

† A small discrepancy exists between the total deaths in London as given above, and the number stated in preceding Tables, in consequence of the former being derived from the Quarterly Returns, which do not always embrace the same number of days as the summary of Weekly Tables.

# COMPARATIVE METEOROLOGY OF THE AUTUMN QUARTERS OF THE YEARS 1846, 1847, & 1848. (Deduced from the Greenwich Observations.)

Quarters ending		Years	Mean reading of the Barometer, corrected and reduced to 32 deg. Fahrenheit	THERMOMETERS												In the Water of the Thames at Greenwich by the Self Registering Thermometers read at 9 o'clock A.M.				Difference between the dew point temperature and air temperature			WIND				
				Highest during the quarter	Lowest during the quarter	Mean			Dew Point	Self-Registering		Of the highest on each day from the observations	Of the lowest on each day from the observations	Mean of the dif- ferences	Mean of the greatest on each day	Mean of the least on each day	Difference between the mean tem- perature of the quarter, and the mean temperature of the same quarter on an average of 35 years	Pressure in lbs. on the square foot			The mean weekly amount of Horizontal movement of the air	Mean amount of Cloud, 0-10	Rain in inches				
						Of the Highest on each day	Of the Lowest on each day	Difference in degrees		Highest in the sun	Lowest on the grass							M E A N									
																		During the quarter	Mean of the observations	During the quarter				Mean of the observations	Mean of the dif- ferences	Mean of the greatest on each day	Mean of the least on each day
Dec..	{ 1846 1847 1848	29.621 29.815 29.747	65.8 73.0 73.6	19.8 26.5 22.4	48.5 62.7 52.7	39.7 42.1 39.9	8.8 10.6 12.5	44.2 47.4 46.6	41.0 44.0 42.2	86.5 — 91.8	40.7 — 59.3	9.0 18.0 13.0	33.0 36.1 33.4	— 48.2 +48.7	46.8 47.6 +45.0	3.1 3.4 4.4	6.7 7.1 7.9	0.8 1.0 1.9	-1.3 +2.3 +1.8	— — s.w.	10.5 12.5 12.0	0.3 0.3 0.5	1008 950 1133	7.3 7.6 6.9	8.16 5.19 7.24		

\* The difference was taken, for the last quarter of 1848, on an average of 7 years. † Mean of 10 weeks, and which requires a correction of +1°.2 on account of the loss of 3 weeks observations. ‡ Mean of 11 weeks, and which requires a correction of -0°.4 for loss of observation, and one of +1°.3 for index error.

## DEATHS in LONDON from all Causes (exclusive of Violent and Sudden Deaths), and from Influenza, in the 13 Weeks of the Autumn Quarters 1846, 1848, and 14 Weeks of 1847.

Number of Weeks .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	TOTAL
Deaths from all causes, ex- clusive of Violent and Sudden Deaths .....	1846 858 999 983	1846 872 985 965	1846 798 933 966	1846 862 943 1087	1846 938 925 1083	1846 912 1034 1140	1846 889 1059 1144	1846 937 1060 1174	1846 918 1641 1122	1846 1020 2419 1116	1846 1111 2367 1080	1846 1214 1862 1069	1846 1214 1178 1284	1846 .. 1486 ..	1846 12,543 18,891 14,213
Deaths from Influenza ....	1846 1 2 2	1846 .. 1 1	1846 1 .. 1	1846 .. .. ..	1846 1 1 3	1846 6 2 ..	1846 4 4 ..	1846 5 4 1	1846 9 36 3	1846 8 198 3	1846 11 374 2	1846 9 270 5	1846 11 142 3	1846 .. 127 ..	1846 66 1,161 24
Mean Temperature....	1846 53.5 51.7 60.3	1846 56.4 53.0 52.1	1846 50.5 54.8 44.7	1846 49.1 53.5 51.5	1846 43.2 49.8 44.9	1846 49.1 50.5 40.3	1846 44.1 49.8 42.1	1846 47.8 40.7 45.5	1846 45.8 46.5 46.7	1846 32.0 47.9 49.0	1846 35.9 46.7 50.2	1846 29.9 48.0 37.5	1846 36.3 35.4 41.2	1846 .. 34.8 ..	1846 44.2 47.4 46.6

## DEATHS in 13 Quarters of the Years 1845—1848.

	Liverpool	Manchester	Birmingham
1845—December.....	1982	1413	777
1846—March .....	1934	1527	876
June .....	2098	1611	842
September ....	2946	2354	1627
December.....	2735	2318	1341
1847—March .....	3068	2185	1187
June .....	4809	2362	1263
September ....	5669	2783	1161
December.....	3725	2210	1795
1848—March .....	2934	2079	1660
June .....	1907	1746	1135
September ....	2189	1779	1009
December.....	2412	1651	851

## DEATHS in London from DIARRHOEA in each of the Four Quarters of the Years 1840—48.

Quarters ending	March	June	September	December
1840	57	62	279	62
1841	68	65	228	112
1842	81	63	489	87
1843	69	50	455	263
1844	79	83	414	129
1845	109	84	449	199
1846	119	153	1549	331
1847	178	202	1196	400
1848	244	239	1043	375

## DEATHS in London from CHOLERA in each of the Four Quarters of the Years 1840—48

Quarters ending	March	June	September	December
1840	3	4	53	6
1841	1	1	23	3
1842	..	7	106	13
1843	6	8	60	14
1844	4	9	47	5
1845	4	2	26	11
1846	7	9	197	15
1847	3	4	98	12
1848	9	17	153	468



## REGISTRARS' NOTES.

(In compliance with the following Instruction, communications—some of which are valuable—have been made by Registrars in all parts of England and Wales; but the present selection is confined to the 447 sub-districts which have heretofore contributed to the Quarterly Return. Facts relating to the whole country will appear in future publications.)

Instruction addressed to the Registrars:—

If, at any time, the Deaths or Births registered during the Quarter have been above or below the average, here state whether Epidemics, such as Measles, Typhus, Cholera, &c. have prevailed in the Sub-District,—or if there is any other fact in the character of the weather, sanitary arrangements, movement of the population, &c., which will account for the circumstance.

The Registrars alone must be held responsible for the opinions expressed in any of the subjoined Notes.

SUP. REG. DISTRICT.	REG. DISTRICT.	
BRIGHTON .....	St. Peter .....	Deaths 271: typhus and scarlatina have prevailed in this district to a very great extent during the past quarter; confining their ravages to close and densely populated localities, inhabited by the poorer classes.
PORTSEA ISLAND ....	Kingston and Landport ...	Deaths 124: small pox, synochus, and typhus, have been very prevalent during the quarter; there have been 11 deaths from small pox, 4 from synochus, and 16 from typhus. The workhouse, with nearly 900 inmates, has nearly escaped the prevailing epidemics, there being but one case of small pox, and one from fever, registered during the quarter.
.....	Landport and Southsea ...	Deaths 186: 41 from small pox; (35 in persons without vaccination.) Typhus, also, has been prevalent, 13 cases having proved fatal.
WINDSOR.....	Windsor.....	Deaths 78: 61 is the average of 5 corresponding quarters. There have been 6 deaths from typhus, 4 from scarlatina, one (that of a passing vagrant) from English cholera, (illness—21 hours duration), 10 from phthisis; also, one from small pox, a rare thing in this district.
ST. ALBANS .....	St. Albans.....	Deaths 81: being an increase on the corresponding quarter of last year of 28, occasioned by scarlet fever and diarrhoea prevailing, especially amongst children.
WYCOMBE .....	High Wycombe.....	Deaths 62: showing an increase on the average. 6 were from measles; 2 from typhus; 2 from scarlatina; and one from English cholera.
.....	Great Marlow.....	Deaths 54: double the amount of last quarter, and also that of the corresponding quarter of last year. Scarlet fever has been fatal in 20 cases. Want of sanitary regulations, and continued wet weather, may account for the illness which has been confined to the town of Marlow, the agricultural portion of the district being healthy.
.....	Wendover.....	Deaths 41: considerably above the average. The excess probably caused by the damp, foggy, unhealthy, weather, which we have had during the quarter. A few cases of typhus occurred.
NORTHAMPTON .....	St. Giles .....	Deaths 95: being below the average. The district is very healthy. Births have been slightly on the decrease for the last two or three quarters, principally from removals consequence of the depressed state of the staple trade.
CAMBRIDGE .....	St. Giles .....	Deaths 35: somewhat above the average. Typhus has been prevalent, and several cases of cholera have occurred.
.....	St. Andrew the Less .....	Deaths 62: being rather above the average. There occurred one case of cholera, which terminated fatally 3 hours after the attack.
IPSWICH .....	St. Margaret.....	Deaths 53: being 8 above the corresponding quarter of last year. Although small pox has been prevalent, only 5 deaths have occurred from the disease.
.....	St. Clement's.....	Deaths 63: being above the average. Small pox has been fatal in 14 cases, without previous vaccination.
.....	St. Matthew.....	Deaths 90: being 20 above the average. 24 persons died of small pox, (19 without previous vaccination.)
YARMOUTH .....	Northern .....	Deaths 100: being more than those of the corresponding quarter of 1847 by 18. Typhus, bilious remittent fever, and measles have prevailed.
EXETER .....	St. David .....	The deaths (74) are much under the average. The district has been remarkably healthy during the whole year. The mortality of the year (276) is 60 less than the average of the last 6 years, and 35 less than the lowest.
.....	St. Sidwell .....	Deaths 91: 29 below the quarterly average. Excessive amount of local taxation, and want of employment, drive the inhabitants from the city. This district suffers, because the railway stations being in Saint David's district, a portion of my population is drawn to them. A vast number of houses are unoccupied, but in consequence of the earnings of the working class being so small, the occupied ones are not less crowded. 4 deaths from scarlatina, with sloughing or abscess of the fauces, have been registered in this quarter.
ST. THOMAS .....	Heavitree .....	Deaths 24: about the average, and less than might have been anticipated, from the nature of the weather, which was one day cold, damp, and rainy, the next mild, and nearly of summer heat—the thermometer now below the freezing point, and in an hour, up to 52° and 56°. The district is healthy, and there has not been a single case of cholera.
.....	Exmouth .....	Deaths 51: nearly double the usual average, more than half having occurred under 5 years of age. Scarlet fever, which was fatal in 12 cases, and measles, still prevail, but not so fatally as before.
.....	East Budleigh .....	Deaths 30: this number is greater, by at least one-third, than that of many previous quarters, owing to the prevalence and fatality of scarlatina and other fevers. The want of sanitary arrangements in some particular localities, previous low scale of diet, and the continued wet weather, with a very oppressive atmosphere, may have tended to induce more fatal cases than under favorable circumstances might have occurred.

SUP. REG. DISTRICT.	REG. DISTRICT.	
ST. THOMAS .....	Broadchist.....	Deaths 20: which is more than the average. Fever, scarlatina, and measles, have been prevalent, and caused 5 deaths, .....
PLYMOUTH.....	St. Andrew .....	Deaths 225: 70 above the average of the 10 preceding autumns. The prevalence of small pox, and fevers, will account for this excess; 48 deaths from the former, and 24 from the latter, having been registered; these, however, are the only two diseases whose fatality has exceeded the average.
.....	Charles the Martyr.....	Deaths 112: being 6 more than in the corresponding period of 1847. Small pox has been very prevalent; 37 deaths from this cause having been registered during the quarter, only one in which the deceased had been previously vaccinated.
PENZANCE .....	St. Ives.....	Deaths 57: being above the average, owing to the concurrent prevalence of whooping cough, and measles, and also of an epidemic dysentery.
.....	Marazion .....	Deaths 18: From want of employment the labouring class have left the district in great numbers; which accounts for both births, and deaths, being below the average. Sickness very much prevails, and it is protracted in particular instances, by the difficulty which is found in obtaining out-door relief to the sick poor. Extreme poverty prevails in the district.
.....	Penzance .....	Deaths 104: rather above the average, owing to 22 cases of dysentery which occurred in the early part of the quarter. The number of births is below the average, owing partly to my now having several to register, and partly to the extensive emigration of young and middle-aged married persons from this district.
BATH .....	The Abbey.....	Deaths 81: being less than in the 2 preceding years. 17 children died at 1 year of age or under. Of 4 who were illegitimate, one died when a fortnight old of opium ordered by the druggist, who according to the statement of the nurse sold the medicine without seeing the child. The other 3 died of dry nursing and diarrhoea.
.....	Walcot .....	Deaths 59: Notwithstanding the changeable and humid state of the atmosphere during the last quarter there has been very little sickness in this district, and the mortality is below the average of corresponding quarters. For the last month whooping cough has prevailed extensively amongst children, and 2 deaths have been registered from this cause; also one from typhus fever, and one from scarlatina maligna.
.....	Lansdown.....	Deaths 66: which is below the average. There has been very little sickness in this district during the last quarter. Whooping cough is the only epidemic that may be called prevalent; 4 deaths from it are registered, 1 from scarlatina, 2 from typhus, 2 from synochus, and 1 from debility, the result of an attack of diarrhoea in a gentleman aged 73 years. The age of 1 person whose death was registered is 104 years.
BRISTOL .....	St. Mary Redcliff .....	Deaths 96: being above the average; principally from scarlatina, which, however, is now abated; and the district is generally healthy. I have had frequently to complain of the length of time the dead are kept before burial. During the quarter, I registered the death of a child from small pox, which was not buried until the 12th day after its decease. The consequence was, that another died from the same cause in the same family, and was kept 9 days, which led to the death of another in the same street. In another case I registered the death of a child from fever, that was kept until another caught the same disease, and died also; they were buried together, the former having been dead 12 days, and the latter 6. This occurred in one of the worst courts in the district, the inhabitants of which were much alarmed. I applied to the magistrates, but was informed they had no power to interfere.
.....	Castle Precincts .....	Deaths 98: about the average; small pox has been fatal in 9 cases. None of its victims had been previously vaccinated.
.....	St. Paul.....	Deaths 110: rather above the average. Scarlatina, and diseases of the pulmonary organs have been prevalent.
.....	St. Augustine .....	Deaths 107: which is above the average. Scarlatina has been very prevalent, but not so much during the last month, as in the previous part of the quarter. 24 deaths from this cause are registered.
CLIFTON .....	St. George.....	Deaths 52: about 15 per cent. above the quarterly average. Scarlet fever, typhus, and influenza have prevailed; but the mortality from typhus has been greatest.
STROUD .....	Stroud .....	Deaths 53: the sub-district has been particularly healthy during the last quarter. There have been cases of common English dysentery from which a few persons have died.
SHREWSBURY .....	St. Mary .....	Deaths 85: exceeding last quarter by 11; yet not more than the average. At present, the district is healthy and nearly free from epidemic disease, although, during the quarter, 8 fatal cases of typhus, 2 of small pox, and 1 of scarlatina, have been registered.
KIDDERMINSTER ....	Kidderminster.....	Deaths 98: inflammation of the bowels and typhus have been unusually prevalent during this quarter, and are in all probability increased by the absence of sanatory regulations.
DUDLEY .....	Dudley .....	Deaths 206: being below the average, and less by 188 than in the same quarter of 1847. 149 have been certified by medical men.
WALSALL.....	Darlaston .....	Deaths 56: the mortality is near the average, allowance being made for decrease of population which is considerably less than at this time last year, many people having left the town since trade has been so bad. The district is tolerably healthy notwithstanding the damp unwholesome weather.
WOLVERHAMPTON and SEISDON .....	Willenhall.....	Deaths 62: although there has been much illness, the deaths are considerably below the average, 46 less than in the corresponding quarter of 1847. 10 were caused by fever.
WOLSTANTON and .. BURSLEM .....	Tunstall .....	Deaths 115: which is below those of last quarter. Scarlet fever prevailed in part of this district, and caused some deaths. Mortality has been very great amongst children under 3 years. The district is now in a much healthier state, than it has been for some time.
.....	Burslem.....	Deaths 85: being 19 below the average of the same quarters. 7 deaths are attributed to scarlatina, 6 to diarrhoea, 2 to fever, and 1 to dysentery.
BIRMINGHAM .....	St. Martin .....	Deaths 104: being below the average, and 62 less than in the corresponding quarter of last year. The district at the present time is healthy. Births 170: which is about the average, although within the last year and a half a great many houses in this district have been cleared away for railway work.



SUP. REG. DISTRICT.	REG. DISTRICT.	
BIRMINGHAM	St. Peter	Deaths 77: being 76 less than were registered in the corresponding quarter of 1847. In comparing the present with former returns of births and deaths, regard must be had to extensive changes which this and other sub-districts have undergone in consequence of so many houses in the most populous parts being taken down for two railway extension lines, which by driving the people to the suburbs, has quite destroyed the equal division of the town for registration and census purposes.
_____	St. Paul	Deaths 41: being 15 less than in any corresponding quarter, and 89 less than in the corresponding quarter of 1847. Something has been done during the past year in effectually draining some parts of the town, which no doubt will have a beneficial effect.
_____	St. George	Deaths 164: being 31 less than in the preceding quarter. 17 persons died of phthisis, 14 of diarrhoea, 13 of bronchitis, 6 of typhus. The district continues in good health.
_____	All Saints	Deaths 47: somewhat below the average, and above 130 per cent. less than in the corresponding quarter of last year.
COVENTRY	The Holy Trinity	Deaths 75: which is about the usual rate of mortality; but it is still marked as heretofore by the excess of children under 5 years of age, of whom in this return there are 38. This can only be accounted for by the unfortunate neglect consequent on the squalid poverty in which they are born, aggravated to some extent by the unhealthiness of their districts.
LEICESTER	East Leicester	Deaths 247: showing an increase of 23 over the preceding quarter. Small pox is at this time very prevalent, and 18 deaths were registered from that disease, (the whole without vaccination). Typhus has been very fatal, 18 deaths having been registered from that epidemic, but it has now taken a milder form. Puerperal fever has caused the death of 4 women, under rather peculiar circumstances, but it has now ceased. Scarletina and measles have nearly disappeared; and the district, but for small pox, would be in a satisfactory state.
_____	West Leicester	Out of 154 deaths, 30 have been from typhus, 8 from measles, 5 from small pox, (not vaccinated), 2 (vaccinated). Measles has been prevalent, but not fatal.
LINCOLN	South	Deaths 69: typhus and scarlatina are very prevalent, and have been during the whole of this quarter.
NOTTINGHAM	St. Ann	Deaths 113: being fewer by 31 than in the corresponding quarter of last year. This decrease is doubtless attributable to the fact that throughout this densely populated district (including the Union workhouse) where epidemics usually prevail with fearful violence, only one instance of these diseases that are wont to destroy the infant population, namely measles and small pox, has come within my observation since the 20th of April last. During the most of October, diarrhoea, and dysentery were unusually prevalent, but only one case of cholera occurred in which the symptoms bore a resemblance to the Asiatic or malignant form. At the beginning of November, mumps attacked several individuals in confined and unhealthy localities, but without fatal results. Pneumonia and bronchitis began in the foggy weather that preceded the late frosts, and still prevail fatally amongst the young.
BASFORD	Arnold	Deaths 54: the return is above the average, owing to scarlatina being so prevalent in the most populous parts of this district. 19 deaths have occurred from this epidemic, and 1 from typhoid fever. The increase of mortality has been amongst the young.
STOCKPORT	Heaton Norris	Deaths 143: 13 per cent. above the average. The excess of deaths over births is remarkable, and has occurred in only 2 previous quarters, both in the year 1848. The births were 103. The mortality, which has increased during the last 3 years has been the result in no inconsiderable degree, of the commercial depression which began in 1846. In that year the mills were stopped, and were only partially opened in 1847; many persons therefore removed to towns where particular manufactures offered employment, and have not been induced to return, now that trade in Stockport has been restored. Scarletina of a malignant form, measles, diarrhoea, and dysentery have been extremely fatal. Only one case of cholera (and that of the common form) has been registered. Fever has considerably decreased. Bronchial affections now shew an increase, but the mortality from phthisis is much less than the average of the quarter. 39 per cent. of the whole mortality occurred amongst children of 5 years and under.
_____	Stockport (first)	Deaths 224: which is about the average. Scarletina and diarrhoea have been very prevalent and fatal.
_____	Stockport (second)	Deaths 109: exceeding the average, owing to the prevalence of scarlatina. There were registered from the above cause, in the months of—October, 18; November, 8; December, 6; total, 32. The deaths registered in each month, are as follows, viz.:—October, 40; November, 40; December, 29; total, 109.
MACCLESFIELD	Prestbury	Deaths 27: rather above the average; English cholera, croup, and measles, having been prevalent.
_____	Macclesfield East	Deaths 90: it is proper to state, that in consequence of the removal of about 150 dwelling-houses in this district, for the North Staffordshire railway, and also of the removal of the union workhouse into the west sub-district of Macclesfield, the births and deaths are considerably less than formerly. The increase of the new buildings has been chiefly in the two adjoining sub-districts of Macclesfield West, and Sutton.
GREAT BOUGHTON	Chester Cathedral Division	Deaths 130: scarlatina still very prevalent; deaths certified as from this cause, 24; from typhus and other fevers, 7. There were 5 from diarrhoea; 2 from cholera.
_____	Hawarden	Deaths 53: 16 above those of the corresponding quarter of 1847. 23 were the result of scarlet fever; 1 of typhus; 1 of simple continued fever; 2 of dysentery and bowel complaint; and 8 of old age, 6 of which occurred above 70 and under 80 years of age, and 2 above 80. Owing to a foundry being closed for upwards of 12 months which used to employ upwards of 200 people in this village, the number of births has gradually diminished.
LIVERPOOL	Dale Street	Deaths 276: showing a decrease of 33 on the previous quarter. One case of cholera. The district healthy.
_____	St. George	Deaths 160: showing an increase in this district. 48 were from phthisis, bronchitis, and other disorders incident to the respiratory organs. Scarletina has been prevalent amongst children, 32 fatal cases having occurred. The others are of miscellaneous character.

SUP. REG. DISTRICT.	REG. DISTRICT.	
LIVERPOOL.....	Saint Thomas .....	Deaths 276: which is below the average. Scarlatina and diseases of the respiratory organs have been most prevalent; from the former there were registered 62, and from the latter 77. The decrease in births and deaths, may be attributed to a diminution in the population, caused by the enforcement of sanitary regulations, which have removed the inhabitants of cellars, and restricted the number allowed to be domiciled in lodging houses. Many births and deaths are lost to the registration, from the practice of burying children as still-born, who die shortly after birth; this being done for the purpose of evading the fee for burial. A case of this nature occurred during the last month. An infant, whom I afterwards discovered had lived 12 days, was interred as still-born by a grave digger, without any certificate, and it is to be feared, that from the facility and secrecy afforded to such persons, many cases of infanticide are concealed.
.....	Mount Pleasant .....	Deaths 509: including 35 at the infirmary, and 205 at the workhouse. The deaths are 107 more than in the last quarter, owing to an increase in the infirmary and workhouse. Scarlatina has been fatal in 58 cases amongst children.
.....	Islington .....	Deaths 330: which is 90 less than in the corresponding quarter of last year. Scarlatina still prevails, there having been registered 69 from that disease. No case of Asiatic cholera in my district.
WEST DERBY.....	Toxteth Park .....	Deaths 452: showing an increase of 40, compared with September quarter, 1848. From typhus there were 6, scarlatina 135, bronchitis 42, diarrhoea 15, dysentery 4, small pox, vaccinated, 7, not vaccinated 3, hydrocephalus 20, consumption 12; measles 10, Asiatic cholera (9 days illness) 1, cholera Anglica 1, phthisis 34, pneumonia 8, influenza 5.
.....	Litherland .....	Deaths 18: of which 9 were from scarlet fever, which has been very prevalent. 1 case of typhus.
.....	West Derby .....	Deaths 236: there is an increase of 35 in the number of deaths, as compared with those of the preceding quarter, which may be attributed to the very changeable state of the weather. Small pox, measles, and scarlatina, are prevalent. The last was fatal in 75 cases. There were 2 deaths from cholera.
WEST DERBY.....	Wavertree.....	Deaths 36: which is above the average. The greatest mortality has been of children under 12 years of age, amongst the poor, viz., 24, chiefly in the village of Wavertree, from scarlet fever and inflammation.
BLACKBURN.....	Oswaldtwistle .....	Deaths 44; births 76: being below the average, chiefly owing to many families having left the district for want of employment.
PRESTON.....	Longton.....	Deaths 21: considerably below the average of former corresponding quarters. The district has, in a great measure, been free from epidemics, which accounts for the decrease in the number of deaths. For the decrease in the births, there is no apparent cause, excepting a partial movement in the population, in consequence of the late stoppage of the cotton mills at Farington. The deaths registered during the last 3 years were, in 1846, 148; 1847, 132; and in 1848, 116.
.....	Preston.....	Deaths 330: 169 less than in the corresponding quarter last year, and 7 less than the average for 12 corresponding quarters.
.....	Walton le Dale .....	Deaths 26; births 45; both below the average, which in a great measure may be accounted for, from the fact, that many of the population of Bamber Bridge and neighbourhood have left, in consequence of the cotton mills in that locality having been closed for more than 12 months.
ROCHDALE.....	Wuerdle and Wardle .....	Deaths 28; births 67: both much under the average. The deaths give the lowest number I have had in any quarter, since registration commenced. There has been no epidemic, nor any movement of the population, that will account for the circumstance. The district is very healthy, notwithstanding the season of the year.
BURY.....	Bury, North.....	Deaths 52: the births and deaths have gradually diminished for the last 2 years, owing to a great number of the working classes leaving the neighbourhood in search of employment, some of the mills having been closed nearly the whole of that time. Births 90. In the corresponding quarter of 1846, the births were 151; deaths 133.
BOLTON .....	Little Bolton .....	Deaths 108: about the average of corresponding quarters of former years. 15 were from typhus, and other malignant fevers, which have been very prevalent here for several months. The epidemics have invariably been confined to the poorest people, who have, in consequence of the scarcity of employment in this neighbourhood, been deprived of the common necessities of life. 4 deaths have occurred from scarlatina.
.....	Eastern.....	Deaths 139: this return exhibits a smaller number of deaths than have occurred in the corresponding quarter of any year since 1843, when the number was 138; it is considerably below the average. A decrease in the population owing to the depressed state of trade, may account for the decrease. Typhus and scarlet fevers of a very malignant description have been the prevailing epidemics.
.....	Lever.....	Deaths 27: which is 8 below the average. Epidemics have not visited this district except one part of Darcy Lever, where typhus has been prevailing.
WIGAN .....	Wigan .....	Deaths 278: of which 15 were caused by measles, 16 by typhus, 14 by diarrhoea, 6 by dysentery, 3 by scarlatina. 154 children died under 5 years of age. Below is shown an account of those diseases which have been most fatal, viz., measles 15, phthisis 23, pneumonia 19, typhus 16, diarrhoea 14, convulsions 46, dropsy 8, bronchitis 28, croup 3, old age and debility 14, scarlatina 3, inflammation of the chest, &c. 8, premature birth 7, dysentery 6. Number of children who died under 5 years of age, 154; of cases without medical attendants, 36. During the present quarter this town has been visited with very heavy rains and dense fogs, which have tended very much to affect the health of the inhabitants. It has generally happened, that many of the deaths have taken place in those localities where drainage, sewerage, and ventilation are most wanted. The authorities of Wigan have given imperative instructions to the Police to look after the removal of all nuisances, and bring to justice those who refuse to comply with the Act lately passed for the removal of nuisances, &c.; and and it is hoped, that ere long many of those sinks of filth, which have but too often been the cause of disease, will become less injurious to health. A great number of people who have been employed on the Liverpool and Bury railway here, have left since its completion. The births in the quarter were 288; being an increase of 18 on the same quarter of last year. The increase of the whole year over last is 300.



SUP. REG. DISTRICT. REG. DISTRICT.

WIGAN.....Pemberton.....

CHORLTON.....Didsbury.....

.....Chorlton-upon-Medlock....

MANCHESTER.....Ancoats.....

.....Deansgate.....

.....Market Street.....

.....London Road.....

.....St. George.....

.....Cheetham.....

.....Failsworth.....

SALFORD.....Greengate.....

.....Pendleton.....

.....Regent Road.....

Deaths 65: being 9 above the average. Measles has been exceedingly prevalent in this district, but only 15 cases have proved fatal. Births 76: being below the average. There has been a decrease of the population, in consequence of the Liverpool and Bury railway being opened, and the greatest part of the laborers having removed.

Deaths 25: much above the average, owing to the prevalence of scarlet fever, which at present is not much abated.

Deaths 199: the health of this district has been very good—the mortality being below that of any corresponding quarter, since 1844, as the following figures exhibit:—in 1845—199; 1846—255; 1847—251. Scarlatina is on the decrease; 21 cases having been registered against 33 in the last quarter. Bowel affections have not been very prevalent; the deaths from diarrhoea and dysentery, chiefly infantile, being 24. The mortality amongst children up to 5 years of age, for the last two months, has been very light; the cases recorded in October being 45, in November 26, and in December 27.

Deaths 433: during the months of October and November scarlatina was very prevalent, and one sixth of the deaths registered were caused by it; during December its virulence much abated. Pneumonia has been, for the last 2 or 3 weeks, fatal to many children.

Deaths 265: of which 25 were from scarlet fever, chiefly during the subsequent dropsical affection.

Deaths 265: males 120, females 145. In October, 55; November, 56; and in December, 50; total, 161 deaths, exclusive of those in the public establishments. There have died in the workhouse, New Bridge-street, 24 males, 37 females; total 61,—a number regarded as low,\* and proving, satisfactorily, the very healthful condition of that institution, in which, during the year just ended, the number of inmates was uniformly over 1200 persons, but never so high as 1300. In the royal infirmary, 24 patients have died. The state of the district, generally is healthy. It is said, that trade for some time has been making slow but steady progress, and in the opinion of many, employment will, in a brief period, be universal to the artisans in the manufacturing districts. This, combined with a probable reduction in the price of provisions, excites the warmest anticipations of prosperity to the trading districts.

Deaths 272: males 140, females 132. Less by 6 than the return for the corresponding quarter, 1847; and by 90, than for 1846. During the quarter just closed, scarlatina amounted to 17½ per cent. above the average of the same period; during the two preceding years to nearly 13 per cent. Fever has been 9 per cent. below. On the other hand, only one case has occurred from measles, though, in 1846, the mortality from this cause was 14½ per cent. Only 1 case of cholera has been registered, which although it was rapid in its termination, was certified decidedly as not being Asiatic in its character. A conspectus of principal diseases for the December quarter of 1846, 1847, 1848, is annexed.

No. of deaths in the December Quarter			Principal causes of death.	Proportion per cent. of deaths, Dec. Quarter.		
1848	1847	1846		1848	1847	1846
47	23	2	Scarlatina .....	17·26	8·28	0·55
24	50	59	Fever .....	8·81	18·00	16·30
20	8	19	Diarrhoea .....	7·34	2·88	5·25
17	17	25	Pneumonia .....	6·24	6·12	6·90
17	15	13	Bronchitis .....	6·24	5·40	3·59
17	19	18	Convulsions .....	6·24	6·84	4·97
16	23	14	Phthisis .....	5·87	8·28	3·87
7	11	25	Marasmus .....	2·57	3·96	6·90
6	9	..	Dysentery .....	2·20	3·24	..
5	11	10	Dropsy .....	1·84	3·96	2·76
1	15	49	Measles .....	0·37	5·40	13·53
1	6	17	Asthma .....	0·37	2·16	4·70
178	207	251	From 12 causes .....	65·35	74·52	69·32
94	71	111	All others .....	34·65	25·48	30·68
272	278	362	Total Decr. Quarter .....	100·00	100·00	100·00

Deaths 233: which is below the average. The district is free from any epidemic, and has been so for some time. The sanitary arrangements adopted by the Corporation are very good, and every thing is being done in this low and densely populated district, that may have the effect of mitigating the force of epidemic disease, should it make its appearance.

Deaths 63: being an increase of 12 over the preceding quarter. The mortality of children has been great; 32 died under 8 years of age. Diseases of the respiratory organs, and scarlet fever, have been very prevalent. Of the 63 deaths, 13 were from scarlet fever, 7 from pneumonia, 5 from bronchitis, 2 from influenza, and 1 from croup.

Deaths 24: being above the average, owing to great mortality amongst children. 8 occurred under 1 year.

Deaths 217: about 30 per cent. below the average for the winter quarters. 39 deaths were caused by scarlatina, principally in October and November; 7 occurred from this cause in Arlington-street, 4 at one house, and 3 at another. The streets in that neighbourhood are generally badly sewered.

Deaths 111: are considerably above the average, which is accounted for, by the prevalence of scarlet fever, 38 deaths from that cause (principally among young children) having been registered.

Deaths 207: 20 per cent. above the average. 60 deaths were registered from scarlatina; but the disease appears to become gradually less fatal. 23 of the 60 were registered in October, 20 in November, 17 in December.

\* This mortality does not appear to be low.

SUP. REG. DISTRICT.	REG. DISTRICT.	
ASHTON-UNDER-LYNE	Ashton Town	The births (194) are less than usual in the quarter, and the number in the year less by about 7 per cent. than the average of the last 5 years. There was a similar decrease from 1840 to 1842 inclusive, and 495 empty houses were counted at the census. There are (I believe) at present upwards of 500 empty houses. High prices of food and want of employment preceded both periods. There has been also a much more extensive emigration than at any time previous, which with the other circumstances accounts for the diminution of births. Deaths 212: being about the average of corresponding quarters; scarlatina and diarrhoea prevailed; the former fatal in 25 cases, the latter in 10.
	Knott Lanes	Deaths 33: which is about the average. Scarlatina and phthisis have prevailed fatally.
OLDHAM	Oldham-above-Town	Deaths 125: this return is below the average of the previous corresponding quarters. The births also show a decrease attributable I think to emigration, and to a partial movement of the population to the adjoining and other districts.
	Middleton	Deaths 34: this return is much below the corresponding quarter of last year. The number then registered was 77. This district is at present in a very healthy state.
	Royton	Deaths 75: above the average, principally owing to the prevalence of measles. From October 27, to December 9th, there were registered 50 deaths; 30 of which were caused by measles, generally accompanied by bronchitis or diarrhoea. This period was remarkable for the wetness of the weather. And it is further remarkable that the cessation of fatality from this cause was simultaneous with the change in the weather.
SHEFFIELD	North	Deaths 233: among them are—20 fever cases, 3 typhus, 9 small pox, 9 measles, 1 whooping cough; and all others, 192; total 234. Comparing the present with the September quarter of 1848, there has been a decrease in the mortality of upwards of 40, and a decrease upon the average of the 3 quarters of the same year, upwards of 80.
	South	Deaths 92: being 23 less than in last quarter, and with every appearance of being still less if the health of the district remains as at present. The births are more than in any quarter since my appointment. I account for it by the arrival of several families of labouring men, and by considerably more than the average of illegitimate children.
	Park	Deaths 85: births 130. The present quarter both in births and deaths is about the average. The 4 quarters now ended have been considerably above any former year, especially in the deaths. I have registered 465 deaths since the 1st Jan., 1848, of which 263 were at only 5 years old, and under—in the same time the births have amounted to 584. Supposing the district to contain 13,500 persons, this would give about 34 deaths and 44 births in a 1000 inhabitants.
	Brightside	Deaths 55: though measles and scarlatina have been prevalent in this district during the last quarter, yet there is only 1 case of the latter which has proved fatal. The mortality has principally been confined to the very young and the aged; there having been 23 deaths from 5 years and under and 11 from 60 to 90 years.
HUDDERSFIELD	Slaithwaite	Deaths 89: the average of the corresponding quarters for the last 9 years is 33.5. The increase is principally owing to the prevalence of scarlatina and measles. Scarlatina has been very fatal in this district. The number of births has been larger than usual during the last 3 quarters, in consequence of the Huddersfield and Manchester railway bringing a great number of labourers into the district.
	Meltham	Deaths 37, births 40: the latter being full 20 per cent. below the average, whilst the former are nearly as much above it. No epidemic prevails here, nor do the above circumstances appear to be attributable to any particular cause.
	Honley	Deaths 40: no epidemic has prevailed in this district during the last quarter, so as to be fatal to any considerable extent; the number of deaths registered being very little more than the average, and one less than in the corresponding quarter of 1847. Births 42: in number below the average of corresponding quarters; which may be partly accounted for by the removal of families from the neighbourhood on account of trade.
	Newmill	Deaths 29: being 8 above the corresponding quarter of 1847. Measles is prevalent in some parts of the district.
	Huddersfield	Deaths 133: medical men report the district to be healthy. The mortality is 54 per cent. below the corresponding quarter of 1847, and 130 below the return of the corresponding quarter of 1846, which was the greatest number registered in any quarter since December, 1841. 3 cases of cholera, and 6 of typhus have been registered during the quarter.
	Golcar	Deaths 66: being about the average: Scarlatina and pneumonia have been prevalent in the district.
HALIFAX	Southowram	Deaths 31: much below the average, typhus has prevailed in part of the district.
	Halifax	Deaths 229: being 62 above the average of corresponding quarters. There were 8 from small pox, 26 from measles, 22 from fever, 12 from diarrhoea, 7 from croup, and 2 from cholera.
BRADFORD	Horton	Deaths 116: about the average. No epidemic in the district; 3 cases of English cholera were registered. Fresh families are beginning to arrive, (trade being something better,) but not in sufficient numbers to make much difference in the births and deaths.
	Thornton	Deaths 68: rather above the average, owing principally to the prevalence of scarlatina and bronchitis among the young.
	Idle	Deaths 53: about the average; but small pox has been much more prevalent than usual, 4 cases having proved fatal in December.
LEEDS	South East	Deaths 145: being less than those of last quarter by 64, and 110 less than the corresponding quarter of last year.
	West	Deaths 200: this number is below the average. In the corresponding quarter of 1847, 250 were registered—in fact there have not been registered so few deaths in any one quarter since that ending March, 1846. There have been 14 deaths from dysentery, and 6 from diarrhoea. Scarlet fever has been prevalent, and 11 cases have proved fatal.



SUP. REG. DISTRICT.

REG. DISTRICT.

**LEEDS** ..... *North* ..... Deaths 260. Shewing a decrease of 70 on the corresponding quarter of 1847. Upon the whole year of 1847 there is a decrease of 289 as stated in the returns below. Of the above 260 deaths, there occurred 31 from diarrhoea and dysentery; from scarlatina 17; typhus 19. At present there appears to be a great deal of sickness in this district, yet not so fatal as in the corresponding quarters of 1846 and 1847.

DEATHS			
Year	Males	Females	Total
1845	485	513	998
1846	596	529	1125
1847	703	685	1388
1848	589	510	1099

**HUNSLET** ..... *Chapelton* ..... Deaths 44: This return shows a large amount above the average, attributable chiefly, to the prevalence of scarlatina.

**KINGSTON-UPON-  
HULL** ..... } *Humber* ..... Deaths 81: 12 cases of cholera occurred during the quarter. Out of 10 successive deaths which were registered betwixt the 16th and 20th days of October, 8 were from cholera.

..... *Myton* ..... Deaths 202: the number of deaths is 16 less than in last quarter, and 95 less than in the corresponding quarter of last year. As usual a very large proportion (86) consists of cases under 5 years of age. There have been of zymotic diseases 39 cases, shewing a decrease upon the last quarter of 22.

**YORK** ..... *Micklethate* ..... Deaths 77: there have been 8 cases of cholera.

**SUNDERLAND** ..... *Monkwearmouth* ..... Deaths 125: the excess of deaths is due to cholera, which was fatal in 29 cases, of which 8 were those of children, almost all about the coal mines. The weather has been very cold and wet with sudden and severe changes. Sanatory measures are in contemplation which if carried out, will be productive of much good. I have reported to the guardians about 25 cases that required to be dealt with, and some improvement has been made. There is great deficiency of light, air, and water. Many passages and stair cases are quite dark, and windows are built up to escape the tax. The increase of births, which were 166, is owing to the movement of population, caused by the making of new docks, and the enlargement of coal mines at Monkwearmouth.

**TYNEMOUTH** ..... *Wallsend* ..... Deaths 20: 3 more than in the corresponding quarter of 1847. One was certified to be from Asiatic cholera, and another from diarrhoea. The latter disease has prevailed to very great extent among persons of all ages, but only 1 fatal case has occurred.

..... *Blyth* ..... Deaths 60: showing an increase in the number of deaths over the corresponding quarter of last year; this arises from the prevalence of Asiatic cholera in this place, 26 (1) deaths having been registered from that cause.

**NEWCASTLE-UPON-  
TYNE** ..... } *Saint Nicholas* ..... Deaths 97: this district has been uncommonly healthy this quarter; cholera has not appeared, except in 1 case. Of 3 cases registered from this disease, 2 were of persons who had just come from places infected with the disease.

..... *All Saints* ..... Deaths 110: a return which is at least 30 below the average. On the 17th October, a death was certified to have been caused by Asiatic cholera—duration, 34 hours; and on the 30th December, another was certified—duration, 17 hours. I have not heard of any others; nor of cases of suspicious character. The sub-district is in a very healthy state.

**COCKERMOUTH** ..... *Keswick* ..... Deaths 30: considerably above the average, which may be attributed chiefly to small pox. The disease is still very prevalent.

**ABERGAVERN** ..... *Blaenavon* ..... Deaths 36: are above the average. Typhus has prevailed, and been fatal in 14 cases; which accounts for the increase.

**WREXHAM** ..... *Hope* ..... Deaths 40: Sanatory arrangements, properly carried out, would tend much to improve the health of the inhabitants within this district.

..... *Wrexham* ..... Deaths 103: being 21 more than in the same quarter of 1847. 9 persons died of scarlatina, 4 women of puerperal fever, besides another who died after childbirth. Sanatory improvement in the town is under consideration, but at present, obstacles prevent the good intention of the sanatory committee from proceeding with the measures in contemplation. A vast majority of the cottages in the town are never lime-washed from year to year; sewerage is unknown; stagnant filth of the most loathsome description meets the eye in every bypath, and in places of public resort.

**HOLYWELL** ..... *Mold* ..... Deaths 78: exceeding the average of the last 11 years, by 20. Scarlatina has proved fatal in 28 cases during the quarter.

# QUARTERLY METEOROLOGICAL TABLE,

Compiled from the Weekly Tables furnished to the Registrar General by the Astronomer Royal.

1848.	Phases of the Moon	THERMOMETERS												Deaths registered in London from Small Pox, Measles, Scarlatina, Hooping Cough, Typhus, Diarrhoea, Dysentery, and Cholera, Typhoid, Consumption, and other diseases of the Lungs; the numbers at each age,* and the total deaths † (except violent and sudden) in each of the 13 weeks ending December 30th, 1848.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		Mean				Self-Registering				In the Water of the Thames at Greenwich by the Self Registering Thermometers read at 9 o'Clock a.m.				Difference between the mean temperature of the week and the mean temperature of the same week on an average of 7 years (1841-47)				Wind as deduced from Osler's Anemometer				The amount of Rain in inches (7 days)				Small Pox				Measles				Scarlatina				Hooping Cough				Typhus				Diarrhoea, Dysentery, and Cholera				Influenza				Phtisis or Consumption				Other diseases of the Lungs				† Deaths at Three Ages, exclusive of violent and sudden (Deaths)				Deaths from all causes, (exclusive of violent and sudden deaths)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		Highest during the week	Lowest during the week	Of the highest on each day, from 6 observations	Of the lowest on each day, from 6 observations	Mean of 42 results	Dew Point	Highest in the sun	Lowest on the grass	Mean of 7 observations	Of the highest on each day from 7 observations	Of the lowest on each day from 7 observations	Mean of 42 differences	Mean of the greatest on each day, 7 observations	Mean of the least on each day, 7 observations	Difference between the mean temperature of the week and the mean temperature of the same week on an average of 7 years (1841-47)	General direction	Greatest pressure in the week	Pressure in lbs. on the square foot	Mean for the week	From the amount of horizontal movement of the air in each week	Mean amount of Cloud, 0-10	Rain in inches (7 days)	31	17	180	31	65	72	2	88	107	525	239	192	983	60 and upwards	15 to 60	0 to 15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
October 7th	1st qr., Oct. 5th	73.6	44.2	63.5	51.7	16.8	60.3	55.0	91.8	82.4	34.0	46.1	59.9	57.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

\* Mean of 3 days.

† Mean of 2 days.

‡ Mean of 10 weeks, and which requires a correction of —0.4 for loss of observation.

§ Mean of 3 days.

¶ Mean of 11 weeks, and which requires a correction of —0.4 for loss of observation, and one of +1.5 for index error.

\* The ages of 26 were not specified in the Returns.

† Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, but when they occur, but at uncertain periods, and they are therefore excluded from this comparison of weeks.



## REMARKS ON THE WEATHER DURING THE QUARTER ENDING DECEMBER 31, 1848.

*By James Glaisher, Esq., of the Royal Observatory, Greenwich.*

The weather during the past quarter has been variable. The changes of temperature have been frequent and great; there has been an unusually large number of exhibitions of the Aurora Borealis and the magnetic instruments have been greatly disturbed. The amount of electricity in the atmosphere has been small, many days together having passed without the instruments at Greenwich being affected.

From the 1st of October to the 10th, the excess of temperature above the average of 7 years was  $6^{\circ}6$ ; the greatest daily excess was  $12^{\circ}3$  on the 7th. Between the 11th and the 21st the temperature was  $4^{\circ}5$  below the average. On the 18th it was  $10^{\circ}$  in defect. From October 22nd to October 30th it was  $5^{\circ}3$  in excess; the greatest was  $7^{\circ}7$  on the 27th. From October 31st to November 16th, the temperature was mostly below the average, its mean defect was  $4^{\circ}2$ , its greatest within the period was  $10^{\circ}2$  on the 4th. From November 17th to December 19th the temperature exceeded the average by  $4^{\circ}8$ ; on December 7th, the excess was  $12^{\circ}4$ ; on the 8th was  $15^{\circ}7$ ; on the 9th was  $14^{\circ}4$ ; and on the 10th was  $10^{\circ}1$ . From December 20th to December 24th, the defect was  $6^{\circ}2$ ; from December 25th to December 29th the excess was  $5^{\circ}8$ , and it was  $2^{\circ}3$  below the average on December 30th and 31st.

The following are the particulars of each subject of investigation arranged as in the preceding quarters.

*The Mean Temperature of the Air at Greenwich*

For the month of October was  $51^{\circ}6$ , which is  $2^{\circ}5$ ,  $6^{\circ}2$ ,  $3^{\circ}6$ ,  $2^{\circ}1$ ,  $1^{\circ}4$  and  $1^{\circ}1$  above those of the years 1841 to 1846 respectively, and  $1^{\circ}3$  below that in the year 1847; or it is  $2^{\circ}3$  above the average of these seven years;

For the month of November was  $43^{\circ}8$ , which is  $1^{\circ}1$ , and  $1^{\circ}0$  above those of the years 1841, and 1842, of the same value as that of 1843,  $0^{\circ}2$ ,  $2^{\circ}0$ ,  $2^{\circ}2$  and  $3^{\circ}1$  below those of the years 1844 to 1847 respectively, or it is  $0^{\circ}7$  below the average of these seven years;

For the month of December was  $44^{\circ}0$ , which is  $3^{\circ}5$ ,  $0^{\circ}1$ ,  $11^{\circ}0$ ,  $2^{\circ}3$ ,  $11^{\circ}1$ , and  $1^{\circ}2$  above those of the years 1841, 1843, 1844, 1845, 1846, and 1847 respectively, and  $1^{\circ}0$  below that of the year 1842, or it is  $4^{\circ}1$  above the average of these seven years.

The mean value for the Quarter was  $46^{\circ}5$ ; that for 1841 was  $44^{\circ}0$ ; for 1842 was  $44^{\circ}4$ ; for 1843 was  $45^{\circ}2$ ; for 1844 was  $42^{\circ}2$ ; for 1845 was  $45^{\circ}9$ ; for 1846 was  $43^{\circ}1$ ; and for 1847 was  $47^{\circ}5$ ; so that the excess of temperature this Quarter above that of the corresponding Quarter in the years 1841, to 1846, was  $2^{\circ}5$ ,  $2^{\circ}1$ ,  $1^{\circ}3$ ,  $4^{\circ}3$ ,  $0^{\circ}6$ , and  $3^{\circ}4$  respectively; the only year between 1841 and 1847, whose mean temperature for this period was greater than that for the present year, was 1847; and the difference is  $1^{\circ}0$ . The average value for this Quarter from the seven preceding years was  $44^{\circ}6$ , so that the mean temperature of the air for the Quarter ending December 31, 1848, was above that of the corresponding Quarter in the preceding seven years by  $1^{\circ}9$ .

*The Mean Temperature of Evaporation at Greenwich*

For the month of October was  $49^{\circ}3$ , which is  $1^{\circ}5$  above that for the preceding seven years;

For the month of November was  $41^{\circ}7$ , which is  $1^{\circ}7$  below that for the preceding seven years;

For the month of December was  $42^{\circ}3$ , which is  $3^{\circ}5$  above that for the preceding seven years.

The mean value for the Quarter was  $44^{\circ}4$ , which is  $1^{\circ}1$  above the average for the preceding seven years.

*The Mean Temperature of the Dew Point at Greenwich*

For the month of October was  $47^{\circ}4$ , which is  $2^{\circ}3$ ,  $5^{\circ}0$ ,  $2^{\circ}7$ ,  $1^{\circ}4$ ,  $0^{\circ}9$  and  $0^{\circ}2$  above those of the years 1841 to 1846, respectively; and  $1^{\circ}7$  below that of the year 1847, or it is  $1^{\circ}6$  above the average of these seven years;

For the month of November was  $38^{\circ}8$ , which is  $1^{\circ}0$ ,  $1^{\circ}6$ ,  $2^{\circ}1$ ,  $3^{\circ}1$ ,  $4^{\circ}0$ ,  $4^{\circ}3$  and  $5^{\circ}3$  below those of the years 1841 to 1847, or it is  $3^{\circ}0$  below the average for these seven years;

For the month of December was  $40^{\circ}1$ , which is  $4^{\circ}9$ ,  $10^{\circ}1$ ,  $2^{\circ}4$ ,  $10^{\circ}7$ , and  $0^{\circ}3$  above those of the years 1841, 1844, 1845, 1846, and 1847 respectively,  $3^{\circ}1$  and  $1^{\circ}9$  below those of the years 1842 and 1843, or it is  $3^{\circ}3$  above the average of these seven years.

The mean value for the Quarter was  $42^{\circ}1$ , which is  $0^{\circ}7$  above the average for the corresponding period of the preceding seven years.

*The mean weight of water in a cubic foot of Air* for the Quarter was 3.3 grains, which is 0.1 grain greater than the average for the preceding seven years.

*The additional weight of water* required to saturate a cubic foot of air was 0.54 grain. This value from the preceding seven years was 0.38 grain.

*The mean degree of humidity* of the atmosphere for October was 0.853, for November was 0.848, and for December was 0.873. The averages for the seven preceding years were 0.888, 0.909, and 0.900 respectively. The value for the Quarter was 0.858, which is 0.041 less than the average for these years.

*The mean elastic force of vapour* for the Quarter was 0.285 inch, which is 0.008 inch less than the average for the preceding seven years.

*The mean reading of the Barometer* at Greenwich for October was 29.646 inches, for November was 29.785 inches, and for December was 29.807 inches; these values are 0.014 inch below, 0.075 inch above, and 0.028 inch below, the averages for the same months from these seven preceding years. The mean value for the Quarter was 29.746 inches, which is 0.011 above the average for these years.

*The average weight of a cubic foot of Air* under the average temperature, humidity, and pressure, was 540.3 grains; the average for the seven preceding years was 542 grains.

*The Rain* fallen at Greenwich in October was 3.50 inches, in November was 1.20 inches, and in December was 2.55 inches. In October, in the years 1841 to 1847 were 5.95, 1.41, 4.25, 4.03, 1.38, 5.13, and 2.00 inches respectively; the mean of these values is 3.45. In November, in the years 1841 to 1847, were 3.70, 4.28, 2.30, 4.32, 2.40, 1.52, and 2.00 inches respectively. The mean of these values is 2.92 inches. In December, in the years 1841 to 1847 were 2.40, 0.74, 0.40, 0.42, 2.00, 1.13, and 2.00 inches respectively; and the mean of these values is 1.29 inches. The depth of rain in October this year was nearly the same as the average from the seven preceding years; the amount in three instances being less, and in four exceeding that of this year. In November the fall was less than in any corresponding period since the year 1828, its amount being 1.72 inches less than the average from the seven preceding years. In December the fall exceeded that in every December since 1833, the mean excess being 1.26 inches above the average since 1841. In October rain fell on 24 days, on 14 of which the amount was less than 0.1 inch; on 6 it was between 0.1 and 0.2 inch; on 3 it was greater than 0.2 and less than 0.3 inch; there was one instance exceeding 0.3 inch, one exceeding 0.4 inch, and one between 0.5 and 0.6 inch. In November there were only two instances of the fall on one day exceeding 0.1 inch, on one of these it amounted to 0.390. In December there were three instances exceeding 0.1 inch, five exceeding 0.2, and one amounting to 0.685 inch; on all other days the fall was less than 0.1 inch. The amount for the Quarter is 7.25 inches, and the average from the seven preceding years is 7.66 inches.

*The fall of Rain during the year 1848* at Greenwich was 31.9 inches; in 1841 it was 33.3 inches; in 1842 it was 22.6 inches; in 1843 it was 24.5 inches; in 1844 it was 25 inches; in 1845 it was 22.3 inches; in 1846 it was 25.3 inches; and in 1847 it was 17.6 inches. The mean of these values is 24.4 inches; so that the excess of the fall of rain this year over the average from the preceding seven years is 7.5 inches.

At Beckington it was 43.16 inches; in 1845 it was 24.94 inches; in 1846 it was 32.30 inches; and in 1847 it was 28.74. In 1845 it fell on 134 days; in 1846 on 168 days; in 1847 on 151 days; and in 1848 on 219 days.

At St. John's Wood, London, the fall exceeded the average from 10 years, by 5.05 inches.

At Aylesbury, it fell on 174 days, amounting to 34.68 inches, exceeding the average from the preceding six years by 9.5 inches.

At Empingham it amounted to 30.36 inches, which is the largest fall since 1830.

At Derby, it was 40.07 inches, exceeding the average from the preceding four years by more than 10 inches, and by 12 inches the average from 20 years.

At Leeds it was 37.86 inches, having fallen on 244 days; in the year 1846 it fell on 218 days, the amount was 25.67 inches; in 1847 it fell on 174 days, and the amount was 28.442 inches.

At Hereford it was 46.41 inches. The average fall from a long series of years is rather more than 30 inches.

The fall of rain during the year 1848 all over the country was about one-third larger than the average fall, and this excess fell during the first three Quarters. The fall in the last Quarter was about its average value at most places.

*The temperature of the water of the Thames* was 47°5 by day, and 45°7 by night. The water, on an average, was of the same temperature as that of the air. During the Quarter the temperature of the water has changed more than usual; the decrease of temperature from November 4th was rapid.



*The direction of the Wind at Greenwich*, from October 1st to October 11th was chiefly S.W., between October 11th and 20th, was chiefly N., and from October 20th to October 31st, was mostly S.

From November 1st to November 7th was variable, but was chiefly S.W. and N.W.; from the 7th to 15th was N.; from the 16th to the 21st was S.W.; from the 21st to the 23rd was S.E., and was chiefly S.W. to the end of the month.

From December 1st to 9th was S.W.; from the 9th to the 15th was mostly S. by E., and was then N. and N.E. to the end of the month.

*The daily horizontal movement of the Air* from October 1st to the 11th was about 160 miles; the greatest value during this period was 300 miles, and the least was 80 miles; from October 11th to the 20th was 130 miles, the greatest was 270 miles, and the least was 30 miles; and from October 20th to the end of the month was 150 miles, the greatest being 240 miles, and the least 40 miles. The average for the month was 150 miles daily.

From November 1st to 7th it was 150 miles, the greatest and least being 245 miles and 10 miles; from the 7th to the 15th 110 miles, the extremes being 200 miles and 80 miles; from the 16th to the 21st 250 miles, the extremes being 495 miles and 185 miles; from the 21st to the 23d 190 miles; and from the 24th to the end of the month 230 miles, the extremes being 300 miles and 70 miles. The average for the month was 165 miles daily.

From December 1st to the 9th it was 290 miles daily; from the 9th to the 15th was 170 miles, and it was 94 miles from the 15th to the end of the Quarter. The extremes in December were 320 miles and 10 miles. The average for the month was 170 miles, and that for the Quarter was 160 miles daily.

The average *daily ranges of the Readings of the Thermometer in Air*, at the height of four feet, were  $16^{\circ}5$  in October,  $15^{\circ}7$  in November, and  $12^{\circ}7$  in December. The average ranges for these months from the observations of the seven preceding years, were  $12^{\circ}5$ ,  $9^{\circ}9$ , and  $8^{\circ}5$  respectively.

In October the *Readings of the Thermometer on grass* were at and below  $32^{\circ}$  on four nights, between  $32^{\circ}$  and  $40^{\circ}$  on 14 nights, and above  $40^{\circ}$  on 13 nights. In November the lowest reading was  $21^{\circ}5$ , the readings were below  $32^{\circ}$  on 18 nights, and above  $32^{\circ}$  on 13 nights. In December the lowest reading was  $18^{\circ}$ , and the readings were below  $32^{\circ}$  on 12 nights, between  $32^{\circ}$  and  $40^{\circ}$  on 15 nights, and above  $40^{\circ}$  on 4 nights.

The mean amount of cloud was 7.3 in October, and 6.7 both in November and December. The averages for the seven preceding years were 6.9, 7.2, and 7.2 respectively.

There were no less than twenty-four exhibitions of the *Aurora Borealis* during the Quarter ending 1848, December 31, which occurred on October 18th, 19th, 20th, 22nd, 24th, 25th, 27th, 30th, (both in the morning and in the evening of the 30th;) November 13th, 14th, 17th, 18th, 21st, 23rd, 24th, 25th, 26th, 30th; December 13th, 17th, 22nd, 27th, and 29th. At all these times the magnets were more or less disturbed. In the weekly reports, it was stated that from October 17th to October 30th, the magnetic instruments were almost always under some cause of disturbance, and particularly on the 17th, 18th, 19th, 23rd, and 24th, slightly on the 21st and 22nd, and moderate on the remaining days. The finest Aurora was that on the 17th November, which was best observed by Professor Challis, and described by him in the Cambridge Chronicle, the most important part of his communication relating to the varying position of the corona. Professor Challis says, "I took twenty-four observations of the position of the corona, partly by reference to stars, and partly "by a small altitude and azimuth instrument, expressly constructed for this kind of observation, which I call "a meteoroscope. A comparison of the results of the several observations seemed to show that the central "point has not a fixed altitude and azimuth, but oscillates in a capricious manner about a medium position, "more especially in the azimuthal direction." Observations of this kind are of the highest importance for comparison of the varying positions of the corona with the simultaneous variations of the magnetic dip and positions of the magnets.

*Thunder storms* occurred at Whitehaven, on October 9th, 23rd, 28th, 29th; November 22nd; and December 1st; at Preston, on December 1st; at Stoneyhurst, on December 9th distant thunder and lightning were noticed. Thunder was heard at Exeter on October 22nd, and on December 1st; and lightning was seen at Truro on October 16; at Stone, on October 28; at Saffron Walden, on December 1st and 6th; at Durham, on October 18th and 28th; at Whitehaven, on December 2nd; at Greenwich, on October 25th; and at Stone, on October 6th, and November 3rd.

*Hail* fell at Truro, on October 18th, November 4th, 7th, and 8th; at Greenwich, on December 1st; at Exeter, on December 23rd; at Whitehaven, on October 23rd, 28th, 29th, December 1st and 4th.

*Snow* fell at Exeter, Empingham, and Saffron Walden, on October 18th; at Truro, Southampton, Greenwich, and Empingham, on November 4th; at Truro, on November 7th and 8th; at Hartwell, on November 23rd, and December 2nd; and at Exeter on December 23rd.

*Solar Halos* were seen at Maidenstone Hill, on October 5th, 24th 29th, and November 25th; at Stone, on November 30th; at Greenwich, on October 24th; at Highfield House, on October 1st, 4th, 18th, 29th, and December 2nd. On November 8th, a *mock sun* was seen at Highfield House.

*Lunar Halos* were seen on October 8th, December 2nd, 4th, 10th, and 12th.

*Large and continuous falls of Rain.*—At Latimer, on October 23rd, rain fell to the depth of 1.17 in the 24 hours following 9<sup>h</sup> A.M. At Falmouth, on December 27, there was a heavy fall of rain amounting to the depth of 1.5 inches in a few hours. At Truro, on December 27 rain fell to the depth of 2.1 inches. At Penzance, the fall of rain on December 27, exceeded 2 inches, and in some parts of the county of Cornwall, the amount on December 27th, was greater. Great damage was done by the consequent floods.

The *mean monthly values* of the several subjects of research for the times of observations are shown in the subjoined table. The approximate mean monthly temperature of the air at different places gives the only results comparable with each other, being independent of the times of the day at which the observations have been made.

The *monthly mean temperatures* in Cornwall and Devonshire, exceeded those at other places, but there seems to have been a good deal of bad weather in those counties; and more snow, hail and sleet seem to have fallen than elsewhere.

The *Readings of the Barometer* till October 4th, were between 29.5 inches and 29.7 inches; after October 4th, it steadily increased and passed the point 30 before noon on the 5th, and remained above this point till the 7th. The highest reading in the month was 30.062, and took place at 9<sup>h</sup> A.M. on the 6th. Between the 8th and the 20th, the fluctuations were very frequent, with generally larger decreasing than increasing readings. On the 25th the reading was 29.111, and was the lowest in the month. On the 26th, at 6<sup>h</sup> P.M., it had increased to 29.749, and after this the readings were low with slight variation till the end of the month. The extreme difference of readings during the month was 0.953 inch.

From November 1st to November 6th, the readings were between 29.6 and 29.4, it then increased from the latter reading to 30.248 on the 10th, at midnight. On the 15th, the reading was 30.348 which was the highest during the month. On the 18th, at midnight, the reading was 29.417. On the 19th the increase was 0.520 inch, and on the 20th the decrease was 0.454. On the 23d, at midnight, the reading was 29.048, which was the lowest in the month. On the 25th, at noon, the reading was 29.984; after this the changes were small till the end of the month. The range during the month was 1.300 inches.

On December 1st the reading decreased 0.436 and was 29.284 at midnight; on the 2nd it increased 0.253, and on the 3rd, at 10<sup>h</sup> A.M., it was 29.730; it then decreased rapidly, and the lowest reading during the Quarter took place on the 5th, at 6<sup>h</sup> A.M., it increased slowly till the 7th, and then quickly from the 7th to the 10th. The reading was above 30 from the 10th to the 13th, it was between 29.5 and 30 from the 13th to the 18th, on this day at 6<sup>h</sup> P.M., it was 29.677, and on the 22nd at midnight, the reading was 30.266, the highest during the month; the reading was generally high till the end of the month. The range during the month was 1.432 inches.

At Stonyhurst, from November 1st to the 6th, the readings were between 29.098 and 29.355, it then increased to 30.150 at 11<sup>h</sup> P.M., on the 12th; it remained above 29.8 till November 17th, when it decreased suddenly to 29.518, and gradually to 28.923 on the 20th; it increased to 29.110 on November 21st, but decreased to 28.624 by 3<sup>h</sup> P.M. on the 22nd; it then increased steadily till November 25th, at 9<sup>h</sup> A.M., when it was 29.615, and the variations afterwards were small; on December 5th, at 9<sup>h</sup> A.M.; the reading was 28.421, the wind at the time blowing strongly from the W.

The observer at Leeds has kindly furnished me with the following agricultural report for the North Riding of Yorkshire.

The continued rain from the 20th of September to November 1st, prevented any large quantity of wheat being sown, even on dry lands, and that which was sown was finished in a very unsatisfactory manner. The comparatively dry weather from November 1st to November 12th, enabled the farmers to sow a great portion of their wheat. On strong wheat soils a large breadth remains for spring sowing with wheat or oats. The seed time upon an average was nearly a month later than usual, and the seed since has vegetated very slowly owing to the wetness and coldness of the soil.



The continued fall of rain in September completely destroyed the crops of corn in backward situations, and large quantities of barley, oats, and beans, in the straw have been carried into the yards, for the cattle and pigs, as not worth the expense of thrashing.

The disease among potatoes has not been found so destructive as was anticipated, and will be more injurious to the grower than to the consumer. In some situations the crops were totally and in others partially destroyed. Yet from the great extra breadth planted with this vegetable last spring there will, perhaps, be no great scarcity felt. I was most surprised by seeing field potatoes taken up as late as the 18th December. The crops of corn now thrashing are very deficient, both in quantity and quality. Turnips are an indifferent crop, and do not bear much eating; the sheep folded upon them have been prevented from doing well by the wetness of the weather; symptoms of rot are apparent among many flocks of sheep.

From the open weather the grass land has been full of meat, and has kept cattle out of the straw yards longer than usual. The disease on the lungs of beasts and milch cows, has been prevalent, and exceedingly fatal; the mortality is calculated to have been 95 per cent. of those attacked.

Within the last few weeks the epidemic prevalent in the years 1839 and 1840, has appeared among lean stock; its symptoms are blisters on the tongue and lameness. It is not often fatal, but reduces the cattle attacked by it very much.

Employment for agricultural labourers is scarce, and its ill effects are much aggravated by the great numbers of men who have been discharged from the railways, whose intemperate and vicious habits tend greatly to demoralize the agricultural districts.

Many of the low grounds have been flooded and farming operations prevented in consequence.

# MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING DECEMBER 31, 1848.

Compiled from Observations furnished by the Gentlemen whose names are mentioned in the first column, the Hygrometrical results having been deduced from Glaisher's Hygrometrical Tables.

Year	Month	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS				WIND	RAIN	Deductions relative to the Humidity of the Atmosphere					Daily Observations taken at										
							Dry Bulb	Wet Bulb	Temperature of the Dew Point	Self-registering			Amount of Clouds 0—10	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean additional weight of Vapour required to saturate a cubic foot of Air		Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere	Weight of a cubic foot of Air							
GUERNSEY, Dr. Hawkins, F.R.S.	Oct.	49° 33'	2° 40' W.	29.753	0.339	29.414	54.9	50.9	47.2	70.5	41.0	59.4	51.9	55.6	7.5	39.5	...	w. by N.	..	23	8.6	in.	3.9	1.2	0.767	4.7	531	9 A.M.
	Nov.	....	....	29.928	0.285	29.643	48.3	44.5	40.0	57.0	40.0	51.4	45.6	53.5	5.8	17.0	....	w. by N.	..	19	2.5	3.3	0.8	0.808	3.9	541	....	
	Dec.	....	....	29.864	0.272	29.592	47.7	44.6	40.8	59.0	30.0	52.4	44.8	48.7	7.6	29.0	....	w. by N.	..	17	4.6	3.2	0.8	0.794	3.8	542	....	
HELSTON, M. P. Moyle, Esq.	Oct.	50° 7'	5° 18' W.	29.679	0.355	29.324	54.1	51.3	48.5	65.0	33.0	57.2	46.0	51.1	11.2	32.0	1.6	s.	5.9	15	3.0	4.0	0.9	0.825	4.9	530	9 A.M.	
	Nov.	....	....	29.907	0.298	29.609	47.8	45.7	43.4	58.0	32.0	50.6	40.6	45.6	10.0	26.0	1.5	s.w. & N.W.	6.5	18	4.1	3.4	0.6	0.859	4.1	541	3 P.M.	
	Dec.	....	....	29.769	0.326	29.443	48.5	47.3	46.0	57.0	31.0	50.6	42.2	46.4	8.4	26.0	2.0	s. & s.w.	7.4	18	5.4	3.7	0.3	0.919	3.1	538	9 P.M.	
FALMOUTH, Lovell Squire, Esq.	Oct.	50° 7'	5° 18' W.	29.69	....	....	52.9	....	....	69.0	35.0	59.9	46.6	53.2	13.3	34.0	1.5	s.s.w.	7.2	19	2.8	....	....	....	....	....	....	9 A.M.
	Nov.	....	....	29.93	....	....	47.3	....	....	56.0	30.0	52.1	41.3	46.7	10.8	26.0	1.3	w.s.w.	7.6	20	3.6	....	....	....	....	....	3 P.M.	
	Dec.	....	....	29.76	....	....	48.2	....	....	59.0	31.0	51.3	43.1	47.2	8.2	28.0	1.5	s. & N.E.	7.5	19	6.7	....	....	....	....	....	9 P.M.	
TRURO, Dr. C. Barham.	Oct.	50° 17'	5° 4' W.	29.838	....	....	....	....	....	66.0	36.0	56.4	46.8	51.6	9.6	30.0	0.9	s.s.w.	6.7	21	3.4	....	....	....	....	....	....	9 A.M.
	Nov.	....	....	30.254	....	....	....	....	....	54.0	34.0	50.4	41.6	46.0	8.8	20.0	0.9	N. & W.N.W.	7.5	17	3.7	....	....	....	....	....	3 P.M.	
	Dec.	....	....	29.991	....	....	....	....	....	58.0	32.0	50.7	43.0	46.8	7.7	26.0	1.0	s.s.w. & E.	7.5	15	7.9	....	....	....	....	....	9 P.M.	
TORQUAY. Edward Veitan, Esq.	Oct.	50° 17'	5° 4' W.	29.900	0.331	29.569	52.1	49.4	46.9	66.0	37.0	56.9	48.3	52.6	8.6	29.0	....	....	..	17	3.7	3.8	0.8	0.829	4.6	537	9 A.M.	
	Nov.	....	....	30.100	0.265	29.835	46.5	43.5	40.5	55.0	34.0	49.7	42.9	46.3	6.8	21.0	....	....	..	13	1.7	3.0	0.8	0.791	3.7	547	....	
	Dec.	....	....	29.930	0.286	29.614	46.1	44.4	42.6	58.0	33.0	49.7	43.9	46.8	5.8	25.0	....	....	..	23	6.0	3.3	0.4	0.876	3.9	544	....	
EXETER, Dr. Shapter.	Oct.	50° 45'	3° 41' W.	29.763	0.361	29.402	51.5	50.1	48.5	69.0	31.0	57.8	43.8	50.8	14.0	38.0	1.6	N.	1.4	20	2.6	4.1	0.4	0.907	5.0	534	9 A.M.	
	Nov.	....	....	29.967	0.281	29.686	45.5	43.9	41.8	58.9	25.5	50.1	38.5	44.3	11.6	33.4	1.8	N.	5.0	13	1.5	3.3	0.4	0.882	3.9	545	....	
	Dec.	....	....	29.873	0.269	29.604	44.7	42.9	40.7	58.0	24.2	48.5	37.6	43.0	10.9	33.8	2.2	s. & w.	6.0	17	5.3	3.1	0.6	0.866	3.7	545	....	
CHICHESTER, Wm. Hills, Esq., Curator of Philosophical Institution.	Oct.	50° 50'	0° 46' W.	29.812	....	....	....	....	45.1	67.0	32.0	56.1	44.5	50.3	11.6	35.0	....	N. & s.w.	..	....	....	....	....	....	....	....	9 A.M.	
	Nov.	....	....	29.936	....	....	....	....	36.6	53.0	26.0	47.3	36.4	41.9	10.9	27.0	....	N. & w.	..	....	....	....	....	....	....	....	3 P.M.	
	Dec.	....	....	29.932	....	....	....	....	37.2	54.0	25.0	46.2	37.8	42.0	8.4	29.0	....	s.w. & N.E.	..	....	....	....	....	....	....	....	....	
OBSERVATORY SOUTH-AMPTON, John Drew, Esq., F.R.A.S.	Oct.	50° 55'	1° 24' W.	29.752	0.358	29.394	52.1	50.4	48.7	70.0	34.5	57.9	46.6	52.2	11.3	35.5	0.7	s.w.	6.0	22	4.2	4.1	0.5	0.891	4.9	534	9 A.M.	
	Nov.	....	....	29.938	0.278	29.660	44.6	43.1	41.4	57.0	27.0	50.3	38.3	44.3	12.0	30.0	1.0	Variable.	6.3	12	2.6	3.2	0.4	0.891	3.8	545	3 P.M.	
	Dec.	....	....	29.948	0.276	29.672	44.1	42.6	40.7	58.4	28.0	47.9	39.0	43.5	8.9	30.4	1.1	Variable.	7.0	18	5.0	3.2	0.4	0.895	3.8	547	9 P.M.	
BECKINGTON, Rev. C. Blathwayt, A.M.	Oct.	51° 24'	2° 22' W.	29.590	0.309	29.281	49.4	47.1	44.5	72.0	29.0	55.9	42.3	49.1	13.6	43.0	1.3	s.w.	6.4	19	4.9	3.6	0.6	0.840	4.8	533	9 A.M.	
	Nov.	....	....	29.730	0.264	29.466	41.5	40.9	40.9	54.0	21.0	47.0	34.4	40.6	12.6	33.0	1.1	s.w.	5.9	20	1.4	3.1	0.2	0.953	3.6	545	3 P.M.	
	Dec.	....	....	29.720	0.274	29.446	40.8	40.7	40.6	56.0	22.0	45.9	36.4	41.2	9.5	34.0	1.3	s.w.	6.5	17	5.4	3.1	0.0	1.000	3.8	545	9 P.M.	

Torquay.—The reading of the barometer for November has been altered from 29.100 to 30.100.



## MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING DECEMBER 31, 1848.—(continued.)

Year	Months	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS						WIND	Amount of Clouds 0—10	RAIN		Deductions relative to the Humidity of the Atmosphere					Daily Observations taken at	REMARKS.				
							Dry Bulb	Wet Bulb	Temperature of the Dew Point	Highest during the month	Lowest during the month	Mean of the high-est on each day			Mean of the lowest on each day	Approximate mean temp. of the month	Average daily range of the thermometer readings	Range of the Readings in the month	Average strength 0—6	General Direction	Number of days on which it fell			Amount in inches	Mean weight of Vapour in a cubic foot of Air	Vapour required to saturate a cubic foot of Air	Mean degree of Humidity
1848	Oct.	51° 31'	0° 0'	29·717	0·349	29·368	50·4	49·2	48·0	70·0	35·3	57·0	46·5	51·8	10·5	34·7	...	s.w. & N.	6·7	16	3·5	4·0	0·921	48 535	8 A.M.	Greenwich Observatory.—The observations have been corrected for diurnal changes.	
	Nov.	.....	.....	29·853	0·256	29·597	42·3	40·8	39·0	55·8	27·7	48·1	38·6	43·4	9·5	28·1	...	w. & N.	6·5	14	0·9	3·0	0·886	35 547	6 P.M.		
	Dec.	.....	.....	29·879	0·264	29·615	42·5	41·3	39·9	57·8	24·7	47·5	39·1	43·3	8·4	33·1	...	s.w. & N.	6·8	11	2·6	3·1	0·914	37 547	.....		
	Oct.	51° 31'	0° 0'	29·646	0·336	29·310	51·6	49·3	47·4	74·0	32·4	59·6	43·1	51·4	16·5	41·6	...	s.w. & N.	7·3	24	3·5	3·8	0·7	0·853	48 533	.....	St. John's Wood.—The amount of rain in the three months exceeded the average fall from 11 years, by 0·60 in., 1·73 in., and 0·66 in. respectively.
	Nov.	.....	.....	29·785	0·254	29·531	43·8	41·7	38·8	57·8	25·2	51·1	35·4	43·2	15·7	32·6	...	s.w.	6·7	12	1·2	3·0	0·5	0·848	35 544	.....	
	Dec.	.....	.....	29·807	0·266	29·541	44·0	42·3	40·1	62·8	21·8	48·9	36·2	42·5	12·7	41·0	...	s.w. & E.	6·7	14	2·6	3·1	0·5	0·873	37 544	.....	
	Oct.	51° 32'	0° 11' w.	29·638	0·354	29·284	50·6	49·5	48·4	.....	.....	.....	.....	.....	.....	.....	1·7	.....	..	23	3·4	4·0	0·4	0·930	49 530	.....	Hereford.—The amount of evaporation was 20 in., 1·7 in., and 1·1 in. in these 3 months respectively.
	Nov.	.....	.....	29·770	0·263	29·507	42·3	41·2	39·7	.....	.....	.....	.....	.....	.....	.....	1·9	.....	..	17	1·1	3·1	0·3	0·920	36 545	.....	
	Dec.	.....	.....	29·788	0·271	29·517	43·0	42·0	40·8	.....	.....	.....	.....	.....	.....	.....	2·3	.....	..	21	2·1	3·1	0·3	0·918	37 545	.....	
	Oct.	51° 41'	0° 33' w.	29·431	0·349	29·082	51·7	50·2	48·0	72·5	31·0	57·5	42·0	49·7	15·5	41·5	1·6	s.	7·5	25	5·1	4·0	0·6	0·873	48 529	9 A.M.	
	Nov.	.....	.....	29·584	0·260	29·324	42·8	41·3	40·0	55·5	25·0	48·1	34·3	41·2	13·8	30·5	1·0	N. & w.	6·7	18	1·5	3·0	0·4	0·882	36 542	3 P.M.	
	Dec.	.....	.....	29·590	0·270	29·320	41·7	41·0	40·0	57·0	22·0	46·0	35·3	40·6	10·7	35·0	1·2	s.	7·5	17	3·5	3·1	0·2	0·930	37 541	.....	
	Oct.	51° 49'	0° 44' w.	29·480	0·334	29·146	50·4	48·7	46·8	74·0	31·0	57·2	40·8	49·0	16·4	43·0	1·3	s.e.	7·3	16	3·8	3·9	0·5	0·887	46 530	9 A.M.	
	Nov.	.....	.....	29·609	0·240	29·369	40·4	39·1	37·3	55·0	22·0	47·8	33·8	40·8	14·0	33·0	0·7	s.w.	5·7	9	0·8	2·8	0·3	0·900	33 544	.....	
	Dec.	.....	.....	29·580	0·253	29·327	40·9	40·1	38·8	56·0	22·0	44·7	35·5	40·1	9·2	34·0	1·3	s.e.	7·4	14	3·0	3·0	0·2	0·928	35 543	.....	
	Oct.	51° 48'	0° 50' w.	29·470	0·327	29·143	50·4	48·4	46·2	69·9	30·9	54·7	43·2	48·9	11·5	39·0	1·1	N. & s.	6·1	23	3·6	3·8	0·6	0·867	45 530	9 A.M.	
	Nov.	.....	.....	29·608	0·247	29·361	42·1	40·4	38·1	53·6	23·0	46·6	35·6	41·1	11·0	30·6	1·2	s.w.	6·5	16	0·7	2·9	0·4	0·862	34 542	2 P.M.	
	Dec.	.....	.....	29·564	0·259	29·305	43·0	41·5	39·4	55·0	23·0	46·6	38·2	42·4	8·0	32·0	1·4	s.w. & s.	6·8	12	2·0	3·0	0·4	0·883	36 540	9 P.M.	
	Oct.	51° 49'	0° 51' w.	29·492	0·363	29·129	52·0	50·6	49·1	76·0	32·0	59·5	42·5	51·0	17·0	44·0	1·3	s.	7·0	20	2·8	4·2	0·4	0·909	50 533	9 A.M.	
	Nov.	.....	.....	29·621	0·261	29·360	43·8	42·0	39·6	61·0	22·0	50·9	34·9	42·6	16·0	39·0	1·1	s.	7·0	12	0·8	3·0	0·5	0·865	36 541	3 P.M.	
	Dec.	.....	.....	29·678	0·264	29·414	43·2	41·9	40·0	60·0	24·0	48·2	37·4	42·8	10·8	36·0	1·4	s.w.	8·0	18	2·8	3·1	0·4	0·898	36 542	.....	
	Oct.	52° 2'	0° 15'	29·800	0·304	29·496	54·0	49·0	44·0	.....	.....	.....	.....	.....	.....	.....	2·9	s.	4·9	20	3·6	3·4	1·4	0·709	43 533	3 P.M.	
	Nov.	.....	.....	29·800	0·262	29·538	46·0	43·0	39·7	.....	.....	.....	.....	.....	.....	.....	2·6	N.	5·7	13	0·9	3·0	0·7	0·803	36 543	.....	
	Dec.	.....	.....	29·850	0·253	29·597	45·0	42·0	38·7	.....	.....	.....	.....	.....	.....	.....	2·9	s.	5·9	11	1·8	2·9	0·7	0·802	36 543	.....	
	Oct.	52° 4'	2° 34' w.	29·35	.....	.....	54·2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Variable.	..	17	5·7	.....	.....	.....	.....	NOON	
	Nov.	.....	.....	29·54	.....	.....	46·0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	s.w.	..	10	1·8	.....	.....	.....	.....	.....	
	Dec.	.....	.....	29·55	.....	.....	44·2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	s.w.	..	13	4·6	.....	.....	.....	.....	.....	



## MONTHLY METEOROLOGICAL TABLE, FOR THE QUARTER ENDING DECEMBER 31, 1848.—(continued.)

Year	Months	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS				WIND		RAIN		Deductions relative to the Humidity of the Atmosphere				at Daily Observations taken	REMARKS.										
							Dry Bulb	Wet Bulb	Temperature of the Dew Point	Highest during the month	Lowest during the month	Mean of the high-est on each day	Mean of the lowest on each day	Approximate mean temp. of the month	Average daily range of the Thermometer readings	Range in the month	Average strength 0—6	General Direction			Amount of Clouds 0—10	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of air	Mean degree of Humidity	Mean quantity of Water in a vertical column of Atmosphere	Weight of a cubic foot of Air			
1848	Oct.	52° 7'	0° 25' W.	29.680	0.360	29.320	52.6	50.8	49.0	70.0	33.0	56.6	43.4	50.0	13.2	37.0	...	S.W.	6.6	19	4.4	4.1	0.5	0.885	5.0	532	9 A.M.	Cardington.—The amounts of rain collected at the height of 36 feet were 3.9 in., 1.0 in., and 1.6 in. in these 3 months, respectively; and the amounts simultaneously registered by a staff gauge placed near the one on the ground were 4.3 in., 1.0 in., and 1.7 in. respectively.		
	Nov.	...	...	29.800	0.267	29.533	43.8	42.2	40.0	56.1	24.0	47.4	34.6	41.0	12.8	32.1	...	W.	5.7	16	1.1	3.1	0.4	0.886	3.7	544	2 P.M.			
	Dec.	...	...	29.826	0.266	29.560	42.8	41.6	40.1	57.0	21.5	41.6	37.1	41.8	4.5	35.5	...	S.W.	7.1	16	1.8	3.1	0.3	0.914	3.7	541	...			
	Oct.	52° 37'	1° 16' E.	29.742	0.358	29.384	52.6	50.7	48.8	71.0	36.0	56.6	46.5	51.5	10.1	35.0	...	...	...	...	...	...	...	...	...	...	...	...	Every day.	Norwich.—The evaporation in October was 0.49 in.; in November, was 0.48 in.; and in December, was 0.81 in.
	Nov.	...	...	29.934	0.252	29.682	43.5	41.3	38.6	55.0	28.0	46.1	37.7	41.9	8.4	27.0	...	...	...	...	...	...	...	...	...	...	...	except midnight and 9h. A.M.		
	Dec.	...	...	29.859	0.260	29.599	42.3	41.0	39.4	58.0	26.0	44.9	37.0	40.9	7.9	32.0	...	...	...	...	...	...	...	...	...	...	...	...		
	Oct.	52.40	1° 7' W.	29.690	0.326	29.364	50.2	(44.4)	45.8	76.0	31.0	55.2	41.1	49.6	14.1	45.0	1.0	N., S., & S.W.	6.5	21	4.8	4.1	0.7	0.839	4.5	531	9 A.M.	Leicester.—During three-fourths of the month of October the atmosphere was damp, and the air was in very little motion. November and December were generally humid, and the sky was overcast. The prevalent clouds were strata, nimbi, and cumuli. The reading of the wet bulb thermometer in October is evidently erroneous.		
	Nov.	...	...	29.796	0.251	29.545	42.4	39.7	36.9	52.0	23.0	46.6	33.6	41.7	13.0	30.0	1.0	N., W., & S.W.	5.5	11	1.4	2.8	0.6	0.800	3.5	541	...			
	Dec.	...	...	29.944	0.261	29.683	41.0	39.9	39.7	56.0	24.0	44.0	35.0	40.4	9.0	32.0	1.5	S. & S.W.	7.0	18	1.9	2.8	0.4	0.809	3.6	546	...			
	Oct.	52° 55'	1° 28' W.	29.550	0.341	29.209	52.6	50.1	47.3	68.0	31.0	55.3	42.8	49.1	12.5	37.0	...	S.W. & N.	...	26	4.2	3.9	0.7	0.842	4.7	529	3 P.M.	Highfield House.—Evaporation 2.3 in., 1.6 in., and 1.6 in. in these 3 months respectively.		
	Nov.	...	...	29.690	0.265	29.425	45.0	42.9	40.2	55.0	23.0	45.8	35.4	40.6	10.4	32.0	...	W. & S.W.	...	19	1.1	3.1	0.6	0.846	3.7	540	...			
	Dec.	...	...	29.640	0.269	29.371	43.3	42.1	40.4	57.0	25.0	46.0	35.7	40.9	10.3	32.0	...	E. & S.W.	...	19	2.8	3.1	0.3	0.907	3.7	542	...			
	Oct.	52.57	1° 10' W.	29.676	0.327	29.349	50.9	48.7	46.3	71.0	32.2	59.5	44.1	50.8	15.4	38.8	...	S.S.W.	6.9	25	4.7	3.8	0.6	0.885	4.5	534	...	Empingham.—On November 2, the Royston crow returned; on the 14th, fieldfares returned; and on December 9, the misel-thrush sang.		
	Nov.	...	...	29.778	0.247	29.531	42.7	40.8	37.9	54.8	22.7	48.3	36.1	42.2	12.2	32.1	...	S.W.	6.3	17	0.7	2.9	0.5	0.852	3.4	545	Noon			
	Dec.	...	...	29.793	0.253	29.540	43.0	41.2	38.7	58.1	26.2	46.8	37.2	42.0	9.6	31.9	...	S.W.	6.9	24	2.4	2.9	0.5	0.862	3.5	545	11 P.M.			
	Oct.	53° 25'	3° 0' W.	29.754	0.321	29.433	53.6	49.6	45.7	67.8	33.5	55.7	46.8	51.3	8.9	34.3	0.8	Variable.	6.9	20	3.4	3.7	1.2	0.761	4.4	532	h.m.	Highfield House.—Evaporation 2.3 in., 1.6 in., and 1.6 in. in these 3 months respectively.		
	Nov.	...	...	29.850	0.266	29.584	46.2	43.3	40.1	56.6	32.2	48.3	31.7	45.0	6.6	24.4	0.8	N.N.W.	7.1	19	2.1	3.1	0.7	0.810	3.7	542	1.8 P.M.			
	Dec.	...	...	29.829	0.261	29.568	44.8	42.1	39.1	56.5	29.4	46.7	40.1	43.4	6.6	27.1	1.1	E. by S.	7.0	12	1.5	3.0	0.7	0.819	3.6	544	...			
	Oct.	53° 41'	1° 30' W.	29.645	0.322	29.323	49.9	47.9	45.8	67.5	31.0	53.1	41.3	47.2	11.8	36.5	1.6	N.E. & S.W.	8.2	30	4.8	3.7	0.6	0.867	4.4	536	9 A.M.	Empingham.—On November 2, the Royston crow returned; on the 14th, fieldfares returned; and on December 9, the misel-thrush sang.		
	Nov.	...	...	29.746	0.252	29.494	43.1	41.1	38.6	55.0	24.0	47.1	35.7	41.4	11.4	31.0	1.5	N.W.	8.1	16	1.5	2.9	0.5	0.859	3.5	543	3 P.M.			
	Dec.	...	...	29.640	0.210	29.426	39.6	37.1	33.3	55.0	19.0	43.1	34.3	38.7	8.8	36.0	1.1	N.W. & S.W.	8.4	17	2.5	2.5	0.6	0.805	2.9	545	...			
	Oct.	53° 41'	1° 30' W.	29.638	0.302	29.336	48.6	46.4	43.8	72.5	30.0	56.3	43.5	49.9	12.8	42.5	...	N. & S.W.	...	29	4.5	3.5	0.5	0.865	4.2	536	3 A.M.	Empingham.—On November 2, the Royston crow returned; on the 14th, fieldfares returned; and on December 9, the misel-thrush sang.		
	Nov.	...	...	29.767	0.243	29.524	41.6	39.4	37.6	1.0	25.0	47.7	34.9	41.3	12.8	29.0	...	W. & S.W.	...	18	0.9	2.8	0.4	0.858	3.3	546	9 A.M.			
	Dec.	...	...	29.846	0.253	29.593	41.4	39.9	38.8	57.5	19.0	43.6	33.9	38.8	9.7	38.5	...	S.W. & E.	...	16	2.1	3.0	0.2	0.928	3.5	548	9 P.M.			
	Oct.	53° 51'	2° 8' W.	29.376	0.302	29.074	49.9	47.5	44.7	67.1	31.2	54.7	42.4	48.6	12.3	35.9	1.0	N.N.E. & N.	7.2	24	5.2	3.6	0.7	0.836	4.2	528	1 A.M.	Empingham.—On November 2, the Royston crow returned; on the 14th, fieldfares returned; and on December 9, the misel-thrush sang.		
	Nov.	...	...	29.488	0.243	29.245	42.8	40.6	37.5	53.2	20.5	46.5	34.6	40.6	11.9	32.7	1.0	N. & W.	7.0	19	4.8	2.9	0.6	0.832	3.4	540	3 P.M.			
	Dec.	...	...	29.439	0.257	29.182	41.4	39.6	38.0	56.1	24.6	45.3	35.7	40.5	9.6	31.5	1.0	S. & E.	7.7	21	4.1	3.0	0.5	0.861	3.5	538	9 P.M.			



MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING DECEMBER 31, 1848.—(continued.)

Year	Months	Latitude	Longitude	Mean reading of Barometer corrected and reduced to 32°	Mean elastic force of Vapour	Mean Pressure of the Atmosphere of Dry Air	THERMOMETERS										Wind		Amount of Clouds 0-10	RAIN		Deductions relative to the humidity of the Atmosphere					at Daily observations taken	REMARKS.		
							Dry Bulb	Wet Bulb	Temperature of the		Highest during the month	Lowest during the month	Mean of the highest on each day	Mean of the lowest on each day	Approximate mean temp. of the month	Average daily range of the thermometer readings	Range of the Readings in the month	Average strength 0-6		General Direction	Number of days on which it fell	Amount in inches	Mean weight of Vapour in a cubic foot of Air	Mean additional weight required to saturate a cubic foot of Air	Humidity	Mean quantity of Water in a vertical column of Atmosphere			Weight of a cubic foot of Air	
YORK, <i>John Ford, Esq.</i>	Oct.	53.56	1.5 W.	29.759	0.366	29.393	52.8	51.1	49.4	70.0	30.0	52.3	41.5	46.8	10.8	40.0	...	...	...	...	S.	23	4.6	4.2	0.5	0.892	5.1	533	8.30	York.—The observations cannot be further reduced, as it was not stated whether the observations were taken in the morning or the evening.
	Nov.	...	...	29.897	0.268	29.629	45.0	43.0	40.4	54.0	23.0	45.7	34.9	40.3	10.8	31.0	...	...	...	...	W.	10	1.1	3.1	0.5	0.852	3.7	541	...	
	Dec.	...	...	29.909	0.268	29.641	44.0	42.4	40.4	55.0	22.0	43.5	35.2	39.4	8.3	33.0	...	...	...	...	S.	14	2.0	3.1	0.5	0.880	3.7	545	...	
WHITEHAVEN. <i>John Fletcher Miller, Esq.</i>	Oct.	54.33	3.25 W.	29.622	0.320	29.302	51.5	48.6	45.7	62.5	32.0	53.2	46.2	49.7	7.0	30.5	...	...	...	...	S.W.	22	5.8	3.7	0.8	0.816	4.4	532	11 A.M.	York.—The observations cannot be further reduced, as it was not stated whether the observations were taken in the morning or the evening.
	Nov.	...	...	29.702	0.263	29.439	44.4	42.4	40.1	53.5	28.0	46.5	39.4	42.9	7.1	25.5	...	...	...	...	Variable	21	3.5	3.1	0.5	0.852	3.6	541	3 P.M.	
	Dec.	...	...	29.637	0.254	29.383	42.9	41.2	38.9	54.0	27.0	45.1	39.2	42.2	5.9	27.0	...	...	...	...	S.W.	18	4.8	3.0	0.5	0.868	3.5	542	10 P.M.	
DURHAM, <i>Rev. R. A. Thompson.</i>	Oct.	54.46	6.18 W.	29.412	0.305	29.107	46.6	45.5	44.1	69.6	29.7	52.7	42.5	47.6	10.2	39.9	...	...	...	...	W.	27	4.4	3.5	0.3	0.923	4.2	534	9 A.M.	York.—The observations cannot be further reduced, as it was not stated whether the observations were taken in the morning or the evening.
	Nov.	...	...	29.444	0.230	29.214	40.1	38.4	35.9	53.4	24.0	45.1	36.7	40.9	8.4	29.4	...	...	...	...	W.	16	1.9	2.7	0.4	0.866	3.2	542	9 P.M.	
	Dec.	...	...	29.630	0.235	29.395	38.9	38.0	36.6	57.7	21.4	44.1	36.1	40.1	8.0	36.3	...	...	...	...	S.W.	6.7	10	0.9	0.2	0.925	3.2	546	...	
NEWCASTLE-UPON-TYNE, <i>G. Muras, Esq.</i>	Oct.	54.48	1.37 W.	29.655	0.340	29.315	49.9	48.7	47.4	68.0	30.0	54.2	43.4	48.7	10.8	38.0	...	...	...	...	S.W. N.E. & S.E.	20	6.3	3.9	0.4	0.926	4.7	534	9 A.M.	York.—The observations cannot be further reduced, as it was not stated whether the observations were taken in the morning or the evening.
	Nov.	...	...	29.694	0.264	29.430	42.6	41.5	39.8	55.0	31.0	42.2	36.5	41.8	10.7	24.0	...	...	...	...	S.W.	13	2.7	3.1	0.2	0.908	3.6	544	3 P.M.	
	Dec.	...	...	29.711	0.246	29.465	41.5	40.0	37.9	57.5	25.0	46.2	34.6	40.4	11.6	32.5	...	...	...	...	S.W. & S.E.	9	1.4	2.9	0.4	0.883	3.4	545	9 P.M.	

The barometer at Guernsey was made by Newman; the correction for the difference of capacities of the tube and cistern is  $\frac{1}{32}$ th; the neutral point is 29.922; the correction for capillarity is 0.642 inch. At Stonyhurst a new barometer, by Barrow, has been used this quarter, which was compared by myself for index error. The maker of the barometer at Chichester is unknown. The specific gravity of the mercury in the barometer at Helston is 13.5; the diameter of its tube is 0.6 inch. At Truro, the diameter of the tube is 0.2 inch; at Exeter, is 0.508 inch; at Southampton, is 0.32 inch; at Aylesbury, is 0.25 inch; at Stone, is 0.4 inch; at Hartwell, is 0.25 inch; at Norwich, is 0.522 inch; at Leicester, is 0.4 inch; at Liverpool, is 0.90 inch; at Leeds, is 0.45 inch; at Wakefield, is 0.33 inch; at Stonyhurst, is 0.32 inch; and at York, is 0.4 inch.

The reduction of the preceding results has been made as follows:—The first step was the application of corrections depending on the time or times of the day at which the observations have been made, to deduce the true monthly values for each element. (For these tables, see the Phil. Trans., part 1, for 1848). The next step was the taking the reduced monthly mean “elastic force of vapour” from the reduced “barometer readings.” The third step was the taking the mean of these reduced monthly values, and reducing that for the barometer to the level of the sea, diminishing that at Uckfield by 0.131 inch; and that at Beckington by 0.087 inch; increasing that at Walworth by 0.089 inch; and that at Derby by 0.193 inch; and in this way the following Quarterly Table was formed. The nature of these corrections will be explained at a future time.

ERRATA.—In the report for the Quarter ending September 30, 1848; in the sixth line from the bottom of page 13, for April read July. In the General Remarks at St. John's Wood, for the mean monthly reading in July, for 47.5, read 37.2.



## QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES	Mean pressure of the Atmosphere of Dry Air at the level of the Sea	Mean temperature of the Air	Highest reading of the Thermometer	Lowest reading of the Thermometer	Mean daily Range of Temperature	Range of the Thermometer Readings during the Quarter	Mean Temperature of the Dew Point	Mean estimated strength 0—6	WIND General Direction	Mean amount of Cloud 0—10	RAIN		Mean weight of Vapour in a cubic foot of Air	Mean additional weight required to saturate a cubic foot of Air	Mean degree of humidity	Mean amount of Water in a vertical column of Atmosphere	Mean weight of a cubic foot of Air.	Height of column of the Barometer above the level of the Sea.
											Number of days on which it fell	Amount collected						
Guernsey .....	29·701	51·4	70·5	30·0	7·0	40·0	42·5	..	w. by N.	..	59	15·7	..	..	..	..	..	123
Helston .....	29·592	48·3	65·0	31·0	9·7	34·0	45·3	1·7	s. & s.w.	6·6	61	12·5	3·7	0·5	0·868	4·4	537	106
Falmouth .....	..	48·7	69·0	30·0	10·7	39·0	..	1·4	s.s.w.	7·4	58	13·1	..	..	..	..	..	..
Truro .....	..	47·7	66·0	32·0	8·7	34·0	..	0·9	s.w.	7·2	53	15·0	..	..	..	..	..	..
Torquay .....	..	48·4	66·0	33·0	7·1	33·0	42·3	..	.....	..	53	11·4	3·3	0·8	0·792	4·0	541	120
Exeter .....	29·736	46·6	69·0	24·2	12·1	44·8	42·9	..	N.	5·1	50	9·4	3·4	0·6	0·857	4·0	541	140
Chichester .....	..	44·2	67·0	25·0	10·3	42·0	..	..	s.w.	..	..	8·9	..	..	..	..	..	..
Southampton Observatory .....	29·641	46·2	70·0	27·0	10·7	43·0	43·6	0·9	Variable	6·5	52	11·8	3·4	0·3	0·935	4·1	543	55
Beckington .....	29·635	43·2	72·0	21·0	11·9	51·0	41·1	1·2	s.w.	6·3	56	11·7	3·2	0·3	0·858	3·8	542	265
Royal Observatory, Greenwich .....	29·653	45·9	74·0	21·8	14·9	52·2	42·1	..	s.w.	6·9	50	7·3	3·3	0·6	0·881	4·0	540	159
Maidenstone Hill, Greenwich .....	29·669	45·5	70·0	24·7	9·4	45·3	41·6	..	s.w. & N.	6·6	41	7·0	3·3	0·5	0·900	3·9	542	107
Lewisham .....	..	45·4	73·0	21·0	13·0	52·0	42·9	..	s.w.	6·5	..	..	3·4	0·4	..	3·4	..	40
Latimer Rectory .....	29·648	43·3	72·5	22·0	13·3	50·5	42·0	1·2	s.	7·2	60	10·1	3·3	0·2	0·933	3·9	540	335
Aylesbury .....	29·629	43·9	74·0	22·0	13·2	52·0	39·1	1·1	s.e.	6·8	39	7·6	3·1	0·5	0·836	3·6	538	280
Stone Observatory .....	29·625	44·0	69·9	23·0	10·1	46·9	39·0	1·2	s.w.	6·4	51	6·3	3·2	0·4	0·881	3·6	538	300
Hartwell House .....	29·672	45·0	76·0	22·0	14·5	54·0	42·3	1·2	s.	7·3	50	6·4	3·4	0·6	0·910	4·0	539	300
Saffron Walden .....	..	44·5	..	..	..	..	..	2·8	s.	5·5	44	6·3	..	..	..	..	..	..
Pool Cottage, Hereford .....	..	45·8	..	..	..	..	..	..	s.w.	..	40	12·1	..	..	..	..	..	..
Cardington .....	29·531	44·3	70·0	21·5	10·2	48·5	42·3	..	s.w.	6·4	52	7·3	3·3	0·3	0·914	4·0	543	70
Norwich .....	29·608	44·7	71·0	26·0	8·8	45·0	41·4	..	.....	..	54	9·4	3·3	0·4	0·851	3·9	543	39
Empingham .....	..	..	..	..	..	..	..	..	s.w.	..	51	7·0	..	..	..	..	..	..
Leicester .....	29·711	44·2	76·0	22·0	11·0	54·0	..	..	s.w.	6·3	59	8·1	..	..	..	..	..	156
Derby .....	29·589	43·6	68·0	23·0	11·0	45·0	42·0	..	s.w.	..	64	8·1	3·2	0·3	0·930	3·9	540	39
Highfield House, Notts. ....	29·595	44·6	71·0	22·7	9·0	48·3	40·4	..	s.w.	6·7	66	7·8	3·1	0·3	0·867	3·7	542	103
Liverpool Observatory .....	29·597	45·3	67·8	29·4	7·3	38·4	39·6	0·9	Variable	7·0	51	7·0	3·1	0·5	0·890	3·6	544	37
Wakefield .....	29·626	43·5	72·5	19·0	11·7	53·5	39·5	..	s.w.	..	60	7·5	3·0	0·5	0·854	3·6	543	113
Stonyhurst Observatory .....	29·639	43·0	67·1	20·5	11·2	46·6	38·8	1·0	N.	7·2	64	14·1	3·0	0·5	0·860	3·5	534	381
Leeds .....	29·602	42·5	67·5	19·0	10·6	48·5	38·5	1·4	s.w. & N.W.	8·2	63	8·8	3·0	0·5	0·829	3·5	543	148
York .....	..	41·7	70·0	22·0	9·9	48·0	..	..	s.	..	47	7·7	..	..	..	..	..	50
Whitehaven .....	..	44·6	62·5	27·0	6·6	35·0	40·6	3·0	s.w.	..	58	14·1	3·2	0·5	0·847	3·7	541	..
Durham .....	29·634	42·5	69·6	21·4	8·8	48·2	38·2	1·7	w.	6·1	53	7·2	2·9	0·4	0·864	3·4	540	340
Newcastle .....	29·552	43·5	68·0	25·0	11·0	43·0	41·1	..	s.w.	..	42	10·4	3·2	0·3	0·907	3·8	542	121
Number of Columns .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

The mean of the numbers in the first column is 29·608 inches, and this value may be considered as that of the pressure of dry air for England during the Quarter ending 1848, Dec. 31. The differences between this number and the separate results contained in the first column, shew the probable sums of the errors of observation, and reduction, the latter arising partly from erroneously assumed altitudes, and partly from the index-errors of the instruments not having been determined. In most cases, the sums of these errors are small.

The mean of the numbers in the second column, for those places situated in Cornwall and Devonshire is 47°9; for those places situated south of latitude 52°, including Chichester and Hartwell is 44°6; for those places situated between the latitudes of 52° and 53°, including Saffron Walden and Highfield House, is 44°2; for those places situated between the latitudes 53° and 54°, including Liverpool and Whitehaven, is 43°3; and for Durham and Newcastle is 43°0. These values may be considered as those of the mean temperatures of the air for those parallels of latitude during the Quarter ending Dec. 31, 1848.

The average daily range of the temperature of the air in Cornwall and Devonshire was 9°6; at Liverpool and Whitehaven was 6°9; south of latitude 52° was 11°6; between the latitudes of 52° and 54° was 9°6; and at Durham and Newcastle, was 8°9.

The greatest mean daily ranges of the temperature of the air took place at Greenwich, Hartwell, Latimer Rectory, and Aylesbury respectively; and the least occurred at Whitehaven, Guernsey, Torquay, Liverpool, and Truro respectively.

The highest thermometer readings during the quarter were 76° at Hartwell and Leicester, 74° at Greenwich and Aylesbury. The lowest thermometer reading was 20°5 at Stonyhurst, and readings about 21°, occurred at several places. The extreme range of temperature of the air during the quarter was therefore about 55°.

The average quarterly range of the reading of the thermometer in air in Cornwall and Devonshire was 37°0; at Liverpool and Whitehaven was 36°9; and the mean of the numbers at all the remaining places is 48°7.

The mean temperature of the Dew Point in Cornwall and Devonshire was 43°5, at all places south of 53°, was 41°6, and it was 39°6, at places north of 53°.

The great mass of air has passed from the S.W. at all places except Exeter and Stonyhurst, at both of which places it seems to have passed from the N.

From the numbers in the tenth column the distribution of cloud has been the same at all places, and such as to have covered somewhat more than three-fifths of the whole sky.

Rain has fallen on the greatest number of days during the quarter at Highfield House, Stonyhurst, Derby, Leeds, Helston, and Latimer, and the average number at those places was 63. It fell on the least number of days at Aylesbury, Hereford, Newcastle, and Saffron Walden, and the average number at these places was 41. The stations at which the largest falls have taken place were Guernsey, Truro, Wakefield, Whitehaven, Falmouth, and Helston. The falls were smallest in amount at Saffron Walden, Stone, Hartwell, and Liverpool. The average fall in the counties of Cornwall and Devonshire was 12·3 in., and at all other places except, Southampton, Beckington, Hereford, Stonyhurst, and York, was 8·5 in.

The numbers in columns 13 to 17 shew the mean values of the hygrometrical results at every station, from which we find, that

The mean weight of vapour in a cubic foot of air for all places (excepting Cornwall and Devonshire) in the quarter ending Dec. 31, 1848, was 3·2 grains.

The mean additional weight required to saturate a cubic foot of air .....

The mean degree of humidity (complete saturation = 1) .....

The mean amount of vapour mixed with the air would have produced water, if all had been precipitated at one time on the surface of the earth, to the depth .....

The mean weight of a cubic foot of air at the level of the sea, under the mean pressure, temperature and humidity, at the mean height of 160 feet .....

And these values for Cornwall and Devonshire were 3·5 grains; 0·6 grain; 0·839; 4·1 inches; and 540 grains respectively.



